

10/2003

Set	Items	Description
S1	2338	JOB() MATCHING
S2	40	S1 AND SUITABLE() (JOB? OR POSITION?)
S3	18	S2 AND LIST?
S4	7	S3 AND PY<=1999

?show file

File 7: Social SciSearch(R) 1972-2003/Aug W2
(c) 2003 Inst for Sci Info

File 9: Business & Industry(R) Jul/1994-2003/Aug 15
(c) 2003 Resp. DB Svcs.

File 13: BAMP 2003/Aug W1
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File 15: ABI/Inform(R) 1971-2003/Aug 16
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File 16: Gale Group PROMT(R) 1990-2003/Aug 15
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File 18: Gale Group F&S Index(R) 1988-2003/Aug 14
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File 20: Dialog Global Reporter 1997-2003/Aug 18
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File 22: Employee Benefits 1986-2003/Aug
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File 27: Foundation Grants Index 1990-2003/Jul
(c) 2003 Foundation Center

File 30: AsiaPacific 1985-2003/Jul 30
(c) 2003 Aristarchus Knowledge Indus.

File 47: Gale Group Magazine DB(TM) 1959-2003/Aug 07
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File 49: PAIS Int. 1976-2003/Jul
(c) 2003 Public Affairs Information Service

File 50: CAB Abstracts 1972-2003/Jul
(c) 2003 CAB International

File 63: Transport Res(TRIS) 1970-2003/Jul
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File 73: EMBASE 1974-2003/Aug W2
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File 112: UBM Industry News 1998-2003/Aug 18
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File 147: The Kansas City Star 1995-2003/Aug 18
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File 149: TGG Health&Wellness DB(SM) 1976-2003/Aug W1
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File 160: Gale Group PROMT(R) 1972-1989
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File 177: Adv. & Agency Red Books: Advertisers 2003/Jul
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File 180: Federal Register 1985-2003/Aug 15
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File 194: FBODaily 1982/Dec-2003/Mar
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File 225: DIALOG(R): Domain Names

(c) 2003 Dialog & SnapNames.
File 233:Internet & Personal Comp. Abs. 1981-2003/Jul
(c) 2003, EBSCO Pub.
File 248:PIRA 1975-2003/Aug W2
(c) 2003 Pira International
File 249:PIRA Mgt. & Mktg. Abs. 1976-2003Aug W2
(c) 2003 Pira International
File 256:SoftBase:Reviews,Companies&Prods. 82-2003/Jul
(c)2003 Info.Sources Inc
File 258:AP News Jul 2000-2003/Aug 18
(c) 2003 Associated Press
File 262:CBCA Fulltext 1982-2003/Aug
(c) 2003 Micromedia Ltd.
File 275:Gale Group Computer DB(TM) 1983-2003/Aug 15
(c) 2003 The Gale Group
File 323:RAPRA Rubber & Plastics 1972-2003/Aug
(c) 2003 RAPRA Technology Ltd
File 387:The Denver Post 1994-2003/Aug 15
(c) 2003 Denver Post
File 388:PEDS: Defense Program Summaries 1999/May
(c) 1999 Forecast Intl/DMS
File 392:Boston Herald 1995-2003/Aug 17
(c) 2003 Boston Herald
File 397:Las Vegas Review-Journal 1997-2003/Aug 18
(c) 2003 Las Vegas R-J
File 427:Fort Worth Star-Telegram 1993-2003/Aug 15
(c) 2003 Fort Worth Papers
File 432:Tampa Tribune 1998-2003/Aug 16
(c) 2003 Tampa Tribune
File 433:Charleston Newspapers 1997-2003/Aug 16
(c) 2003 Charleston Newspapers
File 473:FINANCIAL TIMES ABSTRACTS 1998-2001/APR 02
(c) 2001 THE NEW YORK TIMES
File 474:New York Times Abs 1969-2003/Aug 14
(c) 2003 The New York Times
File 475:Wall Street Journal Abs 1973-2003/Aug 15
(c) 2003 The New York Times
File 476:Financial Times Fulltext 1982-2003/Aug 18
(c) 2003 Financial Times Ltd
File 483:Newspaper Abs Daily 1986-2003/Aug 13
(c) 2003 ProQuest Info&Learning
File 484:Periodical Abs Plustext 1986-2003/Sep W1
(c) 2003 ProQuest
File 485:Accounting & Tax DB 1971-2003/Aug W2
(c) 2003 ProQuest Info&Learning
File 486: Press-Telegram 1992- 2003/Aug 12
(c) 2003 Long Beach Press-Telegram
File 487:Columbus Ledger-Enquirer 1994-2003/Aug 15
(c) 2003 R. W. Page Corp.
File 489:The News-Sentinel 1991-2003/Aug 15
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File 492:Arizona Repub/Phoenix Gaz 19862002/Jan 06
(c) 2002 Phoenix Newspapers
File 494:St LouisPost-Dispatch 1988-2003/Aug 17
(c) 2003 St Louis Post-Dispatch
File 498:Detroit Free Press 1987-2003/Aug 14
(c) 2003 Detroit Free Press Inc.
File 501:Extel Intl News Cards 1995-2002/Mar W4
(c) 2002 Extel Financial Inc

?ds

Set	Items	Description
S1	6953	PERSONALITY() TRAIT? (S) ASSESS?
S2	639	S1(S) (EMPLOY? OR CANDIDATE? OR POSITION?)
S3	245	S2 AND (MATCH? OR COMPAR?)
S4	245	S3 AND PERSONALITY() TRAIT?
S5	165	RD S4 (unique items)
S6	0	S1(S) (RANGE? AND VALUE?) (2N) (JOB() POSTING OR POSITION)
S7	2830277	1 AND (JOB() POSTING OR POSITION?)
S8	512	S1 AND (JOB() POSTING OR POSITION?)
S9	194	S8 AND (RANGE? AND VALUE?)
S10	0	S9 AND METRIC#
S11	0	9 AND TRAIT#
S12	194	S9 AND TRAIT?
S13	136	RD S12 (unique items)
S14	136	S13 AND ASSESS?
S15	111	S14 AND EMPLOY?
S16	1892	(PERSONALITY() TRAIT?) (2N) (ASSESS? OR ESTIMAT? OR MEASUR\$ OR RATE OR RATING OR EVALUAT\$)
S17	326	(PERSONALITY() TRAIT?) (2N) (ESTIMAT? OR MEASUR\$ OR RATE OR R-ATING OR EVALUAT\$)
S18	51	S17 AND (VALUE? OR METRIC?)
S19	34	RD S18 (unique items)

?show file

File 1:ERIC 1966-2002/Sep 11
(c) format only 2002 The Dialog Corporation

File 2:INSPEC 1969-2002/Sep W3
(c) 2002 Institution of Electrical Engineers

File 5:Biosis Previews(R) 1969-2002/Sep W3
(c) 2002 BIOSIS

File 6:NTIS 1964-2002/Sep W3
(c) 2002 NTIS, Intl Cpyrght All Rights Res

File 7:Social SciSearch(R) 1972-2002/Sep W4
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File 8:Ei Compendex(R) 1970-2002/Sep W3
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File 9:Business & Industry(R) Jul/1994-2002/Sep 19
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File 10:AGRICOLA 70-2002/Sep
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File 11:PsycINFO(R) 1887-2002/Aug W4
(c) 2002 Amer. Psychological Assn.

File 13:BAMP 2002/Sep W2
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File 16:Gale Group PROMT(R) 1990-2002/Sep 20
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File 20:Dialog Global Reporter 1997-2002/Sep 20
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File 21:NCJRS 1972-2002/Aug
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File 22:Employee Benefits 1986-2002/Sep
(c) 2002 Int.Fdn.of Empl.Ben.Plans

File 34:SciSearch(R) Cited Ref Sci 1990-2002/Sep W4
(c) 2002 Inst for Sci Info

File 35:Dissertation Abs Online 1861-2002/Aug
(c) 2002 ProQuest Info&Learning

File 36:Ling.& Lang.Behav.Abs 1973-2002/Q2
(c) 2002 Cambridge Scient. Abstr.

File 37:Sociological Abstr. 1963-2002/Aug
(c) 2002 Cambridge Scient. Abstr.

File 41:Pollution Abs 1970-2002/Oct
(c) 2002 Cambridge Scientific Abstracts

File 47:Gale Group Magazine DB(TM) 1959-2002/Sep 19
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File 48:SPORTDiscus 1962-2002/Sep
 (c) 2002 Sport Information Resource Centre
 File 50:CAB Abstracts 1972-2002/Aug
 (c) 2002 CAB International
 File 51:Food Sci.&Tech.Abs 1969-2002/Sep W3
 (c) 2002 FSTA IFIS Publishing
 File 53:FOODLINE(R): Food Science & Technology 1972-2002/Sep 18
 (c) 2002 LFRA
 File 56:ARTbibliographies Modern 1974-2000/Jun
 (c) 2000 CSA
 File 61:LISA(LIBRARY&INFOSCI) 1969-2002/Sep
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 File 63:Transport Res(TRIS) 1970-2002/Aug
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 File 68:Env.Bib. 1972-2002/Jun
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 File 71:ELSEVIER BIOBASE 1994-2002/Sep W3
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 File 73:EMBASE 1974-2002/Sep W3
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 File 74:Int.Pharm.Abs. 1970-2002/Sep
 (c) 2002 Amer.Soc.of Health-System Pharm.
 File 75:TGG Management Contents(R) 86-2002/Sep W2
 (c) 2002 The Gale Group
 File 76:Life Sciences Collection 1982-2002/Sep
 (c) 2002 Cambridge Sci Abs
 File 77:Conference Papers Index 1973-2002/Sep
 (c) 2002 Cambridge Sci Abs
 File 86:Mental Health Abstracts 1969-2000/Jun
 (c) 2000 IFI/CLAIMS(r)
 File 88:Gale Group Business A.R.T.S. 1976-2002/Sep 19
 (c) 2002 The Gale Group
 File 91:MANTIS(TM) 1880-2002/Oct
 2001 (c) Action Potential
 File 94:JICST-EPlus 1985-2002/Jul W4
 (c)2002 Japan Science and Tech Corp(JST)
 File 95:TEME-Technology & Management 1989-2002/Sep W3
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 File 98:General Sci Abs/Full-Text 1984-2002/Aug
 (c) 2002 The HW Wilson Co.
 File 99:Wilson Appl. Sci & Tech Abs 1983-2002/Aug
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 File 103:Energy SciTec 1974-2002/Aug B2
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 File 108:AEROSPACE DATABASE 1962-2002/Aug
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 File 120:U.S. Copyrights 1978-2002/Sep
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 File 121:Brit.Education Index 1976-2002/Q2
 (c) 2002 British Education Index
 File 122:Harvard Business Review 1971-2002/Aug
 (c) 2002 Harvard Business Review
 File 135:NewsRx Weekly Reports 1995-2002/Sep W3
 (c) 2002 NewsRx
 File 141:Readers Guide 1983-2002/Aug
 (c) 2002 The HW Wilson Co
 File 142:Social Sciences Abstracts 1983-2002/Aug
 (c) 2002 The HW Wilson Co
 File 144:Pascal 1973-2002/Sep W3
 (c) 2002 INIST/CNRS
 File 148:Gale Group Trade & Industry DB 1976-2002/Sep 20
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 File 149:TGG Health&Wellness DB(SM) 1976-2002/Sep W2
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 File 150:Gale Group Legal Res Index(TM) 1980-2002/Sep 19

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File 155: MEDLINE(R) 1966-2002/Sep W3

File 156: ToxFile 1965-2002/Sep W3

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File 159: Cancerlit 1975-2002/Aug

(c) format only 2002 Dialog Corporation

File 160: Gale Group PROMT(R) 1972-1989

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File 161: Occ. Saf. & Hth. 1973-1998/Q3

(c) Format only 1998 The Dialog Corp.

09645806 SUPPLIER NUMBER: 17725928 (THIS IS THE FULL TEXT)
Electronic resumes: their time is coming.
Quible, Zane K.
Business Communication Quarterly, v58, n3, p5(3)
Sep, 1995
ISSN: 1080-5699 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2949 LINE COUNT: 00243

ABSTRACT: Electronic resumes will become more common in the future as computer technology becomes more entrenched in business activities. The advantages of electronic resumes over traditional resumes include the capability to conduct initial computerized screening to save employers the effort of going through many resumes just to fill in a few job openings. The characteristics of electronic resumes and a list of resume database firms are presented.

TEXT:

Computerization of the job-seeking process is now a reality, making the use of electronic resumes necessary. These resumes differ in a number of ways from their traditional counterparts. They facilitate the initial screening by computer alleviating employees of the task of having to screen hundreds of resumes to fill a handful of openings. Included in this article is a discussion of electronic resumes in the job search, identification of characteristics of electronic resumes, and a list of resume database service companies.

The computer is beginning to have a significant impact on yet another dimension of our lives: how we undertake a job search. Because an ever-increasing number of today's job seekers are computer literate and are comfortable with computer usage, augmenting the job search with electronic technology is a natural process that makes considerable sense. In companies that use computer technology in hiring, an electronic resume is used to facilitate the initial screening of applicants. Thus, initial screening is no longer done by employees but rather by the computer.

The recent founding of a number of resume database service companies has prompted an increasing number of individuals to use this alternative to the traditional job-seeking process. The typical fee for a job seeker is \$25 for services ranging from three months to a year. Most resume database service companies charge employers for referrals, although some do not.

As an alternative to using a resume database service company, some of the nation's larger companies -- many with offices located throughout the country -- are storing in a centralized database the resumes of individuals who have applied for positions with them. Then, for example, when the company's facility in Tennessee has an opening, the centralized database is searched for potential employees. Thus, job seekers who applied for a position in the company's California facility would be considered for the Tennessee opening if they were willing to relocate. Information received from job applicants might be maintained in the database for up to six months before it is purged. Job seekers whose information is stored in the centralized database are often considered for future openings if they are still available and interested at that time.

The screening of electronic resumes involves the use of key words. For example, suppose a company is looking for a person who has a bachelor's degree in finance, experience in the loan department of a bank, excellent oral and written communication skills, and management potential. The computer performs the search on the basis of these key words, and the individuals whose information is stored in the database who possess these qualifiers will be identified as suitable applicants. Electronic screening is basically the same whether it is done by the company using its own resume database or by a resume database service company.

Advantages of Electronic Resumes

Advantages to job seekers of having their resumes stored electronically are

1. The resumes of job seekers are potentially available to a large number of employers. Because of the relatively inexpensive fee charged by

most of these companies, some job seekers use the services of several resume database companies, thus increasing the number of job openings potentially available to them. 2. The initial screening is done by a bias-free computer rather than a potentially biased employee. 3. Job seekers are relieved of having to send resumes and letters of application to a large number of prospective employers. 4. The availability of job seekers can be made known nationwide, which is especially desirable for those who are willing or desire to relocate.

Advantages to employers who use electronic resumes are these:

1. They are relieved of the drudgery of having to screen manually hundreds of resumes received for a handful of open positions.
2. They can have a focused search conducted, resulting in the identification of potential employees who are well qualified for the open position.
3. They are able to get very quickly (often in a matter of seconds) a list of applicants who possess the desired qualifications.
4. The computer can screen applicants much more economically than can employees.

The Process of Using Electronic Resumes

Today's students in written business communication courses are certain to use the technology at some future time in their job-seeking efforts. Therefore, they need to be made aware of the process and how traditional job seeking differs from job seeking augmented with technology. Guidelines students are given and expected to follow in preparing a traditional resume for conventional job seeking will not serve them well in preparing an electronic resume.

For the job seeker, the following outlines the typical steps of using the services of a resume database service company:

1. The job seeker prepares information for input into the computer database. Common types of information documents are an electronic resume and a background profile sheet. Some companies also accept a letter of application.
2. The information is transmitted (by regular mail, by a fax/modem, or by e-mail) to the resume database service company. The three common techniques used to input information into the service company's database are

- * Data coding: An employee of the resume database service company determines which information is relevant from the documents and enters that information into the computerized database. Because data coding involves value judgments, one person may code data differently than another person coding the same data. Subsequent searches of the database will be only as effective as the accuracy and consistency with which the data were coded.
- * Document scanning: Each document received from the job seeker is electronically scanned into the company's resume database. Common documents are the resume and the letter of application. Subsequent searches will be based on all the information found in the stored documents. Therefore, key words that produce a "hit" in the search process are critical to the documents' success.
- * Synonym-based system: This technique -- the most sophisticated of the three -- uses a computerized expert system in building the library of key words. As the database grows in size and matures, the search process becomes ever more accurate. To illustrate, the synonym-based system will know that "file clerk" and "records clerk" are basically synonymous terms. Therefore, a search using "file clerk" as a key word will also identify those whose documents contain the term "records clerk." Neither of the other two techniques is likely to result in an association between "file clerk" and "records clerk."

3. An **employer** with an open **position** will contact the resume database service company, indicating the need to locate potential **employees**. The **employer** often will specify all the key words to be used in the search or sometimes may seek the input of a representative of the service company in identifying key words. Three levels of key words are generally used: required, desirable but not absolutely necessary, and desirable.
4. The names of the potential **employees** whose documents contain the greatest number of key word "hits" are identified. The greater the number of required key word "hits" a potential **employee** receives, the higher his/her rating will be if the list of potential **employees** is provided on a rank-order basis. An alternative to the rank-order **listing** -- and used by some resume database service companies -- is an alphabetic **listing** of all individuals whose information contained the majority of the key words. Along with a list of potential **employees**, companies generally

Listing job listing of employer

provide at some point (either immediately or later) during the hiring process one or more of the following types of information about each person on the list:

- * A copy of the potential employee's resume (either traditional or electronic or both).
- * A copy of the potential employee's background profile sheet.
- * A summary of the potential employee's background along with his/her resume (either traditional or electronic or both).
- * A summary of the potential employee's background along with his/her background profile sheet.

Information about potential employees is transmitted to the employer in several ways: by regular mail, by fax, by fax/modem, and by e-mail.

5. After using whatever techniques it normally uses to assess the strengths of the potential employees, the employer determines which individuals to interview.

Pitfalls in Developing Electronic Resumes

Several guidelines recommended for preparing a traditional resume should not be followed in preparing an electronic resume. Among these are the following:

1. The focus in an electronic resume is on nouns whereas the focus in traditional resumes is on action verbs. 2. Because electronic resumes are often scanned into the resume database, utmost concern must be given to the font, font size, and font style, as well as other stylistic concerns, such as use of bullets and horizontal and vertical rulings. Although none of these are of much concern when preparing a traditional resume, an electronic resume should be presented using a sans serif font (such as Helvetica or a Helvetica-like font), a font size between 10 and 14, and without special effects. 3. The placement of the applicant's name and address is critical on the electronic resume. Because some resume database service companies are able to scan an electronic resume for automatic input of data into the client's standardized profile sheet, the applicant's name and address should be the first lines on the resume, with each line centered. This is contrary to the preparation of a traditional resume in which college seniors often include on the resume a school address in addition to a permanent address, with one address appearing on the left margin and the other appearing on the right margin. 4. A list of key words -- most often included as the first section after the individual's name and address -- should be included on the electronic resume. The list will often be composed of nouns and adjectives. The closest, but not entirely comparable, section found on a traditional resume is the "Summary of Key Qualifications" or "Summary of Professional Qualifications," neither of which is included as the first content section of the traditional resume. The key word list will include

- a. job titles held by the applicant (accountant),
- b. names of job-related tasks performed by the applicant (managed accounts receivable -- accounts receivable" is listed because key words are noun-based, not verb-based),
- c. skills or knowledge possessed by the applicant (Lotus 1-2-3, year-end financial reports)
- d. degree(s) held (B.S. or bachelor of science)
- e. major (accounting major)
- f. certifications (CPA)
- g. degree-granting institution (University of Washington)
- h. class ranking (top 20%)
- i. interpersonal traits or skills (organized, loyal, proven leader, willing to travel, written and oral communication skills)

The reason for including a separate section detailing key words on the electronic resume and placing it at the top of the resume is that some resume scanning software quits reading after finding a maximum number of key words in each resume it searches. For example, assume the maximum number of key words is set at 50; but if a critical key word is the 51st key word in a job seeker's resume, this person most likely won't be considered a viable applicant if others appear better qualified. For this reason, the astute job seeker will list all of his/her key words at the top of the electronic resume rather than scatter them throughout the resume.

5. Some of the content sections found on traditional resumes are generally not included on electronic resumes. Such commonly omitted sections are special interests and references.

A Sample Electronic Resume

Figure 1 on the next page shows an electronic resume prepared by a college senior finance major who wishes to find employment as a loan officer in a bank.

Other Recommendations for Developing Electronic Resumes

In some instances, students will be able to use their traditional resumes when preparing an electronic version. They simply go through the traditional resume and determine what key words should be used in recasting it as an electronic resume. Also, when registering with a resume database service company, a client will likely be given helpful information about developing an electronic resume, although some service companies require a personal background profile but do not require an electronic resume.

When job seekers are applying for a position in a large company, even if they are not sure an opening exists at the time of application -- and they have both a traditional resume and an electronic resume -- they should consider sending both along with their letter of application. An increasing number of companies that receive electronic resumes and have access to the appropriate scanning equipment and software are finding that key word search is useful, especially if they have to screen several hundred applicants for just a few positions. Thus, the computer is able to do the initial screening previously done by employees. Even if the job seeker is not successful in landing a job with the company at this time, his/her materials can be electronically stored for future consideration.

Documents that have the potential for scanning as input into a computer database should not be folded when mailed. A fold on a line of print may cause sensitive scanning equipment to misread, thus reducing the job seeker's potential for making the list of referred potential employees.

If students have difficulty developing an electronic resume because they are unsure of what key words to include, having them locate a number of relevant job-vacancy notices in the classified section of several newspapers will be useful. Reading through the job-vacancy notices will help them identify suitable key words they should include in their key-word list. However, students should be cautioned about including key words that are not appropriate for their situation. For example, a student should not indicate that he/she possesses excellent written communication skills unless he/she in fact possesses such skills.

If a job seeker registers with a resume database service company and finds that he/she is not getting many referrals, consideration should be given to examining the list of key words in the electronic resume. Because of the critical nature of the key words, the job seeker may need to make an adjustment in his/her key word list.

List of Resume Database Service Companies

A number of resume database service companies are located throughout the country. Because their policies, fees, and clients served vary, information should be obtained from each company as a means of deciding which one(s) will likely best serve the job seeker. Among the companies are

* Access, 1900 West 47th Place, Suite 215, Shawnee Mission, KS 66205. Telephone: 913-432-0700. * Career Database, P. O. Box 2341, Cambridge, MA 02238. Telephone: 617-876-9521. * Career Placement Registry Inc., 302 Swann Avenue, Alexandria, VA. Telephone: 800-368-3093. * CORS, One Pierce Place, Suite 300 East Itasca, IL 60143. Telephone: 800-323-1352. * Electronic Job Matching, 1915 N. Dale Mabry Highway, Suite 307, Tampa, FL 33607. Telephone: 800-749-4100. * Job Bank USA, 1420 Spring Hill Road, Suite 480, McLean, VA 22012. Telephone: 800-296-1872. * kiNexus, P. O. Box 803818, Chicago, IL 60680. Telephone: 800-828-0422. * National Resume Bank: 3637 4th Street, No. 300, St. Petersburg, FL 33704. Telephone: 813-896-3694.

Summary

Business communication instructors who are concerned about keeping the content of their courses up to date will want to present information about the electronic resume, in addition to the traditional resume. They will also want to explain to their students differences between electronic job-seeking and traditional job-seeking processes. Furthermore, sharing with students specific information about various resume database service companies will enable them to undertake a more effective electronic job-seeking campaign. The net result is a win-win situation for both the job seeker and employer.

Cynthia M. Lane 1872 Brownstone Court Dallas, TX 74485 214-784-7893

Key words: Loan officer. Texas Banking Association Intern. Customer service. Loan processing. Teller. Data processing. Trust. Account

reconciliations. Loan applications. Tax reports. Cash in-out statements. Trust agreements. QuatroPro. Excel. Lotus 1-2-3. IBM-compatible computers. Finance major. Bachelor's degree. Top 10 percent of class. University of Texas-Arlington. Fort Worth, TX. Quick learner. Written and oral communication skills. Leadership. Detail minded.

Objective: To obtain a position as a loan officer, with eventual advancement to vice president for lending services.

Education: University of Texas -- Arlington, 1991-1995.

Finance major. Bachelor of Business Administration awarded May, 1995. Rank: top 10 percent of class.

Experience: Texas National Bank, Ft. Worth, TX

Texas Banking Association Summer Intern, 1994 (one of 15 selected in competitive selection). Rotated through several departments and worked with a number of documents/software programs.

Ft. Worth State Bank, Ft. Worth, TX

Part-time teller during school year, 1992-1995.

Worked with a number of documents.

Activities: Member of Junior Chamber of Commerce

Volunteer for Big Brother-Big Sisters of Arlington

President of college chapter of Financial Management Association

Member of Beta Gamma Sigma honorary

Figure 1. Sample Electronic Resume

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DESCRIPTORS: Resumes (Employment)--Automation; Computers--Usage; Employee selection--Data processing

FILE SEGMENT: TI File 148

03459091 SUPPLIER NUMBER: 06218698 (THIS IS THE FULL TEXT)

Handwriting analysis an ideal stress 'detective.'

PR Newswire, 0211LA2

Feb 11, 1988

LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT

WORD COUNT: 424 LINE COUNT: 00037

TEXT:

HANDWRITING ANALYSIS AN IDEAL STRESS 'DETECTIVE'

PASADENA, Calif., Feb. 11 /PRNewswire/ -- Mismanaged stress kills more than 2,000 people a day and costs society more than \$60 billion a year, according to human-resource consultant Dr. Judith S. Ettinger.

"Stress is an insidious killer that can be easily detected by professional handwriting analysis," Ettinger told attendees at a business conference here on "corporate burnout." The two-day conference began today at the Pasadena Center.

Ettinger, who received her doctorate degree in counseling psychology from Arizona State University, is director of counseling services at Phoenix-based Handwriting Resource Corp. Ettinger said that "corporate burnout is a direct result of mismanaged stress, which will continue to be a major business and social concern until managers learn how to detect and effectively manage stress in themselves and their subordinates."

Ettinger attributed stress to an inability to cope physically and psychologically with society's demands.

"When coping mechanisms are overwhelmed, as they often are in business, the result is anxiety, tension, fatigue and exhaustion -- which can lead to death in extreme cases through heart attack or stroke," Ettinger said.

"To manage stress and curtail corporate burnout, we need an easy-to-administer stress-alert system that can detect and monitor rising stress levels among business employees.

"The problem is that the signs of stress are subtle and can be disguised by people who have learned during their business careers how to hide their weaknesses.

"Handwriting analysis is an ideal stress detective. It's easy to administer. It's accurate, and it never lies."

Ettinger said that handwriting analysis acts like a barometer when it comes to stress.

"Properly conducted, handwriting analysis can, among other things, accurately measure the coping mechanisms in our personalities and monitor changes in our ability to handle stress. It can also assess stress levels on job performance and indicate the need for behavioral changes and therapeutic help."

Handwriting Resource Corp. is a human-resource consulting company that has specialized in personality assessment through computer-enhanced handwriting analysis since 1983. The firm markets two major **personality - profiling** instruments that measure and assess up to 130 mental, social, motivational and emotional character traits. In addition to **job - matching** and organizational development applications, HRC Profiles are ideal for stress reduction and self-improvement programs, marriage and family counseling, and compatibility evaluations.

/CONTACT: Eric Stoltz or Christiana Hills, 213-551-2877, both of Aaron D. Cushman and Associates, for Handwriting Resource/
kp/db

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COMPANY NAMES: Handwriting Resource Corp.--Officials and employees

INDUSTRY CODES/NAMES: BUS Business, General

DESCRIPTORS: Graphology--Psychological aspects; Stress (Psychology)--
Diagnosis

NAMED PERSONS: Ettinger, Judith S.--Attitudes

FILE SEGMENT: NW File 649

4/9/4 (Item 1 from file: 492)
DIALOG(R) File 492:Arizona Repub/Phoenix Gaz
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04509996

IN BRIEF

ARIZONA BUSINESS GAZETTE (AB) - MONDAY January 25, 1988
Edition: Weekly Section: Marketing Page: 18
Word Count: 316

TEXT:

French publisher and videotex join forces

Le Nouvel Observateur, a major independent French publisher and operator of one of the largest consumer services on the French Minitel videotex system, last week announced the formation of a subsidiary to market its videotex products and "know how" worldwide.

Stratus introduces new computer system

Stratus Computer Inc. introduced a new computer last week they say is the industry's lowest-cost fault-tolerant on-line transaction processing computer systems.

The new systems, the XA2000 Models 50 and 70, are extensions to the company's existing product line and start at \$79,000.

The company says these new systems lower the cost of high-performance on-line transaction processing technology, making it more affordable for medium-to-small-sized businesses.

Office-space vacancies increase

Reduced levels of construction combined with strong leasing activity have produced a decline during 1987 of eight-tenths of 1 percent in national office vacancy rates, the first annual decline in six years.

The information was reported by Coldwell Banker Commercial Group, and was included in their "Vacancy Index of the United States."

The survey covers 34 downtown and suburban office markets in the United States and Canada during the fourth quarter of 1987.

They reported a downtown national average vacancy rate of 16.3 percent at year-end 1987, 0.1 percent below the 1986 level.

Computer handwriting analyses 'near science'

Handwriting Resource Corp. recently said it has developed a **personality profiling** system that has elevated professional handwriting analysis to a "near-science."

Chairman Jack J. Walker described Handwriting Resources's new computer profiling system, which has been 12 years in development, as a milestone in the field of handwriting analysis and personality assessment.

Created primarily for **job - matching** and other human resources needs, Handwriting Resources says the new series of **personality profiles** identifies, measures and assesses up to 130 mental, social, motivational and emotional traits from a single writing sample.

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DESCRIPTORS: TECHNOLOGY; BUSINESS

?

PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES

?

DIALOG(R)File 15:ABI/Inform(R)
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01135053 97-84447

Interactive job service offered by newspapers

Santoro, Elaine

Direct Marketing v58n8 PP: 11 Dec 1995 CODEN: DIMADI ISSN: 0012-3188

JRNL CODE: DIM

DOC TYPE: Journal article LANGUAGE: English LENGTH: 1 Pages

WORD COUNT: 199

ABSTRACT: CareerPath.com, launched by 6 of the US' largest newspapers, intends to be the leading interactive marketplace for employers and job seekers.

TEXT: Comprehensive national interactive employment service offered by six of the nation's largest newspapers. CareerPath.com, launched by The Boston Globe, Chicago Tribune, Los Angeles Times, The New York Times, San Jose Mercury News, and The Washington Post, intends to be the leading interactive marketplace for employers and job seekers by providing the most "robust" offering of job listings from across the nation.

The service combines the help wanted ads from the six founding newspapers into a single database that is now accessible through CareerPath.com home page (<http://www.careerpath.com>) on the World Wide Web.

In time, CareerPath.com intends to introduce a comprehensive package of related employment services for job seekers and advertisers. The service will offer a resume database, searching capabilities, employer/job seeker matching services and company profiles. Also available will be "alerts," which will allow the employer or job seeker to be notified any time a candidate or job opportunity with a certain profile comes on the market.

Advertisers will eventually be able to place ads exclusively on CareerPath.com. without purchasing a print ad. Each newspaper will determine its own pricing structure for inclusion of print ads on CareerPath.com home page and will also set its own prices for "Internet-only ads."

THIS IS THE FULL-TEXT. Copyright Hoke Communications Inc 1995
GEOGRAPHIC NAMES: US

DESCRIPTORS: Service introduction; Newspapers; Classified advertising
CLASSIFICATION CODES: 9190 (CN=United States); 7200 (CN=Advertising); 8690
(CN=Publishing industry); 9000 (CN=Short Article)

?

DIALOG(R) File 15:ABI/Inform(R)
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00803018 94-52410

Key competencies are measured by work-relevant questionnaires

Anonymous

Personnel Journal Perspectives Supplement PP: 1, 4 Jan 1994 CODEN:

PEJOAA ISSN: 0031-5745 JRNL CODE: PEJ

DOC TYPE: Journal article LANGUAGE: English LENGTH: 2 Pages

WORD COUNT: 703

ABSTRACT: Work-relevant personality questionnaires have a proven track record of helping employers determine if an individual has what it takes to be an effective manager. Like any form of assessment, personality questionnaires vary in their reliability, validity, usefulness and effectiveness. The Occupational Personality Questionnaire (OPQ) is the test of choice for over 2,000 organizations world-wide because it offers extensive features and capabilities far beyond that of other instruments in its class. What sets the OPQ apart from other questionnaires is the OPQ Expert System. This System is a process of analyzing and reporting OPQ data in a format that is useful and relevant for managers and supervisors. One of the major benefits of the OPQ Expert System is its versatility. Employers and managers will find that the information generated by the System provides critical background that can point the direction of many key management decisions, including those in the areas of team building, training and development, selection and leadership identification.

TEXT: That's right! Work-relevant personality questionnaires have a proven crack record of helping employers determine if an individual has what it takes to be an effective manager.

In-depth research has concluded that at least five global categories of personality-based behaviors are linked to management performance and success. By measuring specific aspects of these global areas such as interpersonal relations, thinking style, and feelings and emotions, a personality questionnaire can generate critical information about an individual. This data can be then compared to that of other successful managers.

For example, a personality questionnaire can determine if a person is persuasive, controlling, independent, practical, democratic, conceptual, detail conscious, achieving, critical, decisive... plus many other characteristics that are relevant in a management position.

This assessment capability enables organizations to select candidates most likely to succeed at managerial positions, identify the training and development needs of key managers and build effective and productive work teams.

OPQ: The Work Relevant Personality Questionnaire

Like any form of assessment, personality questionnaires vary in their reliability, validity, usefulness and effectiveness. Therefore, careful consideration should be given when selecting a personality questionnaire.

The Occupational Personality Questionnaire(R) (OPQ) from Saville & Holdsworth Ltd is the test of choice for over 2,000 organizations world-wide because it offers extensive features and capabilities far beyond that of other instruments in its class.

OPQ's success in the workplace is attributed to its roots: it was developed in conjunction with 56 major corporations during a four-year period of intensive research and testing. Since it was first published in 1984, OPQ has been administered in hundreds of thousands of situations. It meets all of the professional guidelines established for test construction and it complies with EEO criteria for use in employment screening.

The OPQ Expert System Provides A Wealth of Information

What sets the OPQ apart from other questionnaires is the OPQ Expert System. The Expert System is a process of analyzing and reporting OPQ data in a format that is useful and relevant for managers and supervisors.

Specifically, the Expert System individual report is based on thirty personality dimensions that are clearly related to managerial performance. This analysis is accompanied with a narrative report which explains the OPQ results in jargon-free, easy-to-understand language. And, it compares the individual's personality traits to those of over 10,000 middle and senior level managers.

OPQ Expert System reports can be generated in less than one minute using the personal computer version. The reports are also available by mailing or faxing test scores to SHL's scoring bureau service.

The OPQ Expert System is a Valuable Tool for a Variety of Applications

One of the major benefits of the OPQ Expert System is its versatility. Employers and managers will find that the information generated by the Expert System provides critical background that can point the direction of many key management decisions, including those in the following areas:

*TEAM BUILDING

OPQ scores can be used to **match** compatible **personality traits** among **employees** that will be working together in a group. The result is a more cohesive and effective work team.

*360deg-FEEDBACK

The OPQ Perspectives, a companion instrument, provides a vehicle for collecting feedback from an individual's peers, managers and subordinates. This data, when integrated with the personality analysis, creates a more comprehensive and accurate profile of the individual.

*TRAINING AND DEVELOPMENT

Results generated by the OPQ Expert System help identify an employee's strengths and developmental needs. This knowledge is useful for planning training programs aimed at strengthening weaknesses and for directing employees into areas that capitalize on their strengths.

*SELECTION

An applicant's OPQ scores can be compared with critical job competencies of successful performers, enabling organizations to select the best candidate for a position.

*LEADERSHIP IDENTIFICATION

The OPQ Expert System highlights various personality traits that determine an individual's leadership or subordinate styles. By identifying leadership qualities, individuals who have management potential can be coached to assume future responsibilities.

A Simple Way to Achieve Greater Management Effectiveness

The OPQ was developed specifically for use in a business setting. It's quickly administered and scored, results can be generated automatically, and it provides a wealth of information that can be used in a variety of situations. Simply stated, the OPQ is a simple and inexpensive way to predict job performance.

THIS IS THE FULL-TEXT. Copyright Personnel Journal 1994

DESCRIPTORS: Human resource management; Questionnaires; Personality; Job analysis; Management development

CLASSIFICATION CODES: 6100 (CN=Human resource planning); 2500

(CN=Organizational behavior)

05438054 SUPPLIER NUMBER: 11080232 (THIS IS THE FULL TEXT)
**Employee selection makes Ritz tradition. (Ritz-Carlton Hotel Co.'s Targeted
Selection Process employment program) (column)**
Wagner, Grace
Lodging Hospitality, v47, n7, p30(1)
July, 1991
DOCUMENT TYPE: column ISSN: 0148-0766 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT
WORD COUNT: 791 LINE COUNT: 00063

TEXT:

When W.B. Johnson Properties bought the U.S. rights to the Ritz-Carlton name along with its sole Boston hotel in 1983, the Georgia real estate developer acquired much more than a building and a license. With the landmark Ritz-Carlton Boston came 50 years of tradition-of luxury accommodations, fine dining and impeccable service-all of which the company hoped to cultivate in hotel properties worldwide.

In eight years since, the Atlanta-based Ritz-Carlton Hotel Company, a wholly owned Johnson subsidiary, has distinguished itself as a leader in the ultra-luxury hotel sector. In locations from Sydney, Australia to Kansas City, Missouri, Ritz-Carlton hotels have successfully upheld, if not improved upon, the venerable Ritz Boston's traditions.

Interestingly, in doing so, Ritz-Carlton has adopted some rather non-traditional management philosophies. Most notable among them is the company's procedure for selecting employees.

Consider the following: An individual with close to 10 years' experience as a luxury-hotel concierge applies for the same position at a Ritz-Carlton. Having served everyone from rock stars to Fortune 500-company chairmen, he is highly qualified for the job. Throughout the interview process, the applicant is poised. He smiles. He exudes enthusiasm. He's sure he's Ritz-Carlton material.

He is, the company later confirms. It wants him-but not for the concierge job. Through a medium known as Targeted Selection Process, Ritz management has concluded he'll make a wonderful group sales director.

Ritz-Carlton created Targeted Selection Process in 1987. Seeking to ensure a successful **match** of employee with **employment**, Ritz President and COO Horst Schulze appointed a team of managers to develop **personality profiles** for every position within the company.

For inspiration, the team sat down with the company's best employees-the best bellmen, the best sales managers, and so on. Based on their personality **traits**, a profile was compiled for each position, and a series of three interviews was developed to identify those **traits** in a potential hire.

Though not all Ritz-Carlton interviews end with such surprising results as that described above, the company has come to rely on Targeted Selection Process as an invaluable hiring tool.

Targeted Selection Process is an essential part of our philosophy," says Cheryl O'Donnell, general manager of the recently opened Ritz-Carlton Hotel Cleveland.

Faced with more than 4,000 job applicants for the hotel's 300 jobs, O'Donnell says Targeted Selection proved essential in helping land the right individuals in the right positions. "Not everyone is meant to work in a particular area," she says. "If you're not right for one position, you might be perfectly targeted to another."

Targeted Selection Process requires an applicant to meet with three levels of Ritz-Carlton management. Before a position is offered, all levels must agree on an applicant's compatibility with that position.

"Targeted Selection is very precise. Its structure prevents panic hiring and in most cases ensures a good union," O'Donnell says. Given the high cost of turnover, a "good union" can significantly help protect a hotel's bottom line.

Targeted Selection is just the first step in what Ritz-Carlton calls the Quality Vision. Upon being selected to work at a Ritz property, new employees are further versed on the company's culture in a

day-and-a-half-long orientation session.

New employees also get introduced to the Ritz-Carlton Credo. Comprised of the 20 Ritz-Carlton Basics (e.g.: "We are ladies and gentlemen serving ladies and gentlemen."), as well as the company's definition of the three steps of service, the Credo is compacted into a pocket-size laminated card.

Employee training is another aspect of the Quality Vision. Within each department of the hotel, it is overseen by employees who have applied and passed certification to train others. To complete the training process, new employees also must pass a test.

Sixteen days into the job, Ritz-Carlton employees attend a half-day "reunion" with the hotel's executive committee. "This gives us a chance to find out how things are going. If someone is unhappy or overwhelmed at that point, I want to know about it," says O'Donnell.

Following the reunion, Ritz reviews new employees after 60 days and conducts subsequent reviews every six months.

As the Ritz-Carlton Hotel Company aims to establish global presence and "own" the top four percent of the traveling public by year's end, its properties are firmly committed to finding and keeping good employees. "Our employee-selection process is crucial," says O'Donnell, "because we're only as good as our weakest employee." BY GRACE WAGNER ASSOCIATE EDITOR

CAPTIONS: Cheryl O'Donnell. (portrait)

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SPECIAL FEATURES: illustration; portrait

COMPANY NAMES: Ritz Carlton Hotel Co.--Personnel management

INDUSTRY CODES/NAMES: TRVL Travel and Hospitality

DESCRIPTORS: Personnel management--Technique; Hotels and motels--

Personnel management

NAMED PERSONS: O'Donnell, Cheryl--Personnel management

SIC CODES: 7011 Hotels and motels

FILE SEGMENT: TI File 148

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DIALOG(R)File 9:Business & Industry(R)
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01007135 (THIS IS THE FULLTEXT)

Interactive Jobs Network Matches Jobs & Employers 02/16/94

(Watermark Systems of San Francisco, has announced that Interactive Jobs

Network (IJN) is on-line as a national employment information service)

Newsbytes News Network, p N/A

February 16, 1994

DOCUMENT TYPE: Journal (United States)

LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 299

TEXT:

SAN FRANCISCO, CALIFORNIA, U.S.A., 1994 FEB 16 (NB) -- Watermark Systems of San Francisco, has announced that Interactive Jobs Network (IJN) is on-line as a national employment information service.

The new service has been created to assist job seekers and employers, by offering what the company describes as an "affordable access to the national job market."

The first release is a Windows version which offers a menu-driven interface for filling-out the "search profile." The profile, customized by "position sought," "location," "salary requirements" and other special needs, is then entered and matched to any existing **employment positions listed**. A user may then post electronic-mail responses to the applicable matches.

Speaking with Newsbytes, Steve Murray, company vice president, said, "A process that can take weeks and even months at times can be completed on Watermark Systems in less than 24 hours. Our interactive database allows users to alter their search profile, at no additional cost, if the results are too general or if there are not enough matches. For the basic subscription fee of \$20 a month, a user may develop one profile off-line and access the database fifteen times. We have provided an 800 number and a local access number in our area code."

According to the company, Interactive Jobs Network has built-in screening capabilities so that all profiles remain private and secure and faxing services at additional charges. All charges are credited to the users credit card, upon approval.

Watermark claims that its service outperforms other on-line employment services which often list a long line of job opportunities that are not applicable to the searchers specific needs. The network also offers potential employers the same customizing abilities, so that they can create a pool of qualified applicants.

(Patrick McKenna/19940215/Press Contact: Judy Marie Merrill, Shepard Merrill Communications Group, 415-965 7452

Copyright 1994 Newsbytes News Network

COMPANY NAMES: WATERMARK SYSTEMS

INDUSTRY NAMES: Information industry; Online services

PRODUCT NAMES: On-line service providers (737500)

CONCEPT TERMS: All product and service information; Product introduction

GEOGRAPHIC NAMES: North America (NOAX); United States (USA)

00803018 94-52410

Key competencies are measured by work-relevant questionnaires

Anonymous

Personnel Journal Perspectives Supplement PP: 1, 4 Jan 1994 CODEN:
PEJOAA ISSN: 0031-5745 JRNL CODE: PEJ
DOC TYPE: Journal article LANGUAGE: English LENGTH: 2 Pages
WORD COUNT: 703

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THIS IS THE FULL-TEXT. Copyright Personnel Journal 1994

DESCRIPTORS: Human resource management; Questionnaires; Personality; Job analysis; Management development

CLASSIFICATION CODES: 6100 (CN=Human resource planning); 2500

(CN=Organizational behavior)

0914567 98-76076

High-tech body chase Recruiters track down new techniques for finding employees

Hilpert, Mark

Washington Business Journal (McLean, VA, US), V16 N44 p31

PUBL DATE: 980306

JOURNAL CODE: WBJ DOCUMENT TYPE: Newspaper article

WORD COUNT: 1,276

DATELINE: Washington, DC, US, South Atlantic

TEXT:

Much has been said about the need to increase the local pool of qualified workers available to fill information technology and telecommunications jobs. Less has been said about how companies are actually filling openings in the Washington area's tight labor market, estimated by regional technology groups to have at least 30,000 fewer workers than available jobs.

Companies are turning to a variety of options to get their man or woman - from traditional "head hunters" to hipper online recruiting services. And companies providing those services are pursuing new strategies to get a jump on their competitors.

One company enjoying booming sales to employers hot on the trail of workers is CareerBuilder Inc., an online job-matching service based in Reston. The company's Web site, CareerBuilder.com, charges employers a fee to list job openings and lets job hunters surf free of charge, sending them e-mail alerts when the type of position they want comes open.

Chief Executive Officer Rob McGovern touts the cost and speed advantages of his service over those of off-line recruiters, who criticize online recruiters as not personalized to individual client needs.

In response to the critics, McGovern says his service costs about 90 percent less than the average cost of getting workers through a head hunter - more than \$8,000 per person, according to the Society of Human Resource Managers.

McGovern also claimed his search engine goes much faster, cutting average placement time from two weeks or more to less than five days.

McGovern added that CareerBuilder also has a broader reach because of the Internet, which experts say has approximately 60 million users per day.

"Newspapers are limited by their circulation and their geography," he said. "Head hunters are limited to their Rolodex."

McGovern's numbers would seem to back up his claims. Three million searches were conducted on the CareerBuilder Web site database of 5,000 listings in January alone, according to company figures. Local employers who have signed on include American Management Systems, UUNet, BTG and DynCorp.

"This is one of the toughest job markets in the country," said McGovern. "It's warfare out there among employers, and we see companies getting more sophisticated in their recruiting. It's not as simple as running an advertisement in The Washington Post anymore." Filling demand

Because of growing demand for more help in technical recruiting, agencies that previously stuck to filling traditional management and secretarial jobs have started new divisions dedicated exclusively to finding technology and telecommunications workers for their clients.

One such company is District-based The Choice Inc.

"I really saw an opportunity for us with all the high-tech vacancies in the area," said Tracy Paquin, president of The Choice.

Drew Hudson, who heads The Choice's new technical division, said the move of temporary staffing companies into more technology recruitment is becoming more common.

"The technology industry has a lot of trends - a lot you hop on and ride them for a while," he said.

Companies more focused on finding upper-level management for technology and telecommunications clients are also adapting.

Paul Unger, who helps direct A.T. Kearney Executive Search Inc.'s 24-person technology practice in Alexandria, says finding senior management is especially hard for companies like satellite manufacturers that need a high level of technical knowledge from all staff.

Clients who are in precisely that sort of predicament compose around 25 percent of A.T. Kearney's revenue, which comes from all industries.

Unger said A.T. Kearney has yet to post an opening for an executive position on its Web site - although it's being considered - largely because it believes attempting to draw only from people looking for jobs may limit a company's ability to find the perfect fit for their needs.

"The Internet is great for people who are looking for jobs, but we recruit people who aren't necessarily looking," said Unger, who added that his approach is not to make a direct pitch to prospects but to call such candidates and see if they know anyone who may be a good fit for a certain position. Special focus

Jim Searing, who directs the Tysons Corner technology practice office of Korn/Ferry International, said traditional recruiters like his company realize there is a growing demand for recruiters with a specialized focus in finding workers with specific technology skills. Searing, who opened the Tysons office last May with 10 people, said that demand is causing his practice to add more recruiters and more space to meet the needs of a lengthening list of clients.

Searing said Korn/Ferry bases its ability to compete on the superiority of its database of job candidates and an emphasis on communication among industry specialists within the company to filter that huge list down to Mr. or Ms. Right.

"Being big in this case is useful," he said, emphasizing the large number of experts Korn/Ferry can draw on to understand a specific client's needs. "Size helps."

Like his colleagues, Searing agreed that salary warfare among employers to attract the people they want is a problem and that incentives such as stock options and other "golden handcuffs" are being used to attract and retain the right people for the job.

However, money isn't everything, Searing said.

"Autonomy is a big incentive," he said. "I'm not going to work for someone who's always telling me what to do." Noncompete

One legal means that has emerged to deter employees from jumping ship is the infamous "noncompete" clause that more employers are including in the contracts of their new hires. Such agreements prohibit workers from immediately going to work for a direct competitor should they leave the company.

"People are being asked to sign tighter and tighter noncompetition agreements," said Paul Villella, who manages Source Services Corp.'s Tysons

Corner office. "Agreements are definitely getting costlier and tougher to enforce and more difficult to get employees to sign."

Others question the impact of such agreements.

Searing called such legal restrictions "a tool, but not necessarily an effective tool" and said that the most important law affecting worker freedom of movement is Virginia's right-to-work statutes.

(Maryland and the District of Columbia have no such laws.)

Right-to-work statutes, common in southern states, give employees the right to leave at a moment's notice, just as employers have the right to unceremoniously dump a worker immediately for no stated reason.

Villella said being proactive and paying a fair salary to retain good employees is the key.

"In the long run, it's more strategic and cheaper than a noncompetition clause," he said. "Money is what drives a lot of this turnover - greed."

Although Searing argued that employees don't actually bounce around as much as they are perceived to in the modern economy, he said average length of service has dropped from 10 to 12 years to four to six years in all industries.

Traditional off-line recruiters, while emphasizing the personalized aspect of their services as an advantage over online recruiters, nevertheless say they are using the Internet.

"We do a lot to drive people to our Web site and database search engine," said Villella, adding that Source Services also publishes its salary surveys on various online sites for free viewing as a means to attract more clients.

Villella added that, although such methods are a good way to make Source Services stand out from the crowd, the key for his company is offering "human capital insight," a combination of human resources services that includes coaching employers on maximizing employee performance and retention.

"Clients love that because otherwise they have to contract with several different firms to take care of all those needs," said Villella. "They are having an incredible challenge in retaining staff - employees are leaving at their highest point of utilization."

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COMPANY NAMES: A T Kearney Executive Search, Chicago, IL, US, SIC:7361,
CareerBuilders Inc, Reston, VA, US, SIC:7361,
Choice-Washington DC, Washington, DC, US, SIC:7361,
CLASSIFICATION CODES: 8300 (Service industries not elsewhere classified)
DESCRIPTORS: Industry profiles; Professional recruitment; Business growth;
High tech industries; Target markets; Labor supply
SPECIAL FEATURE: Photo

03483687 Supplier Number: 47182552 (THIS IS THE FULLTEXT)

ORACLE: Oracle leverages IntelliMatch and the power of its own web technology to fill key job openings

M2 Presswire, pN/A

March 4, 1997

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 689

TEXT:

M2 PRESSWIRE-4 March 1997-ORACLE: Now hiring -- Oracle leverages IntelliMatch and the power of its own web technology to fill key job openings (C)1994-97 M2 COMMUNICATIONS LTD

RDATE:030397

- * On-line career fair to recruit candidates for fast-growing Oracle divisions, showcases IntelliMatch's innovative recruitment services

- * Oracle WebServer and Oracle Universal Server powers Internet transactions

- * Enables thousands of applicants to submit resumes in real-time on the web

Oracle Corp., the world's leading supplier of software for information management, has joined with IntelliMatch, Inc., the leading Internet recruiting service provider for matching job seekers with employers on the Internet, to fill key positions at Oracle with an on-line career fair. Accessible at both www.oracle.com and www.intellimatch.com, the on-line career fair runs from March 4 through March 14, and will enable Oracle recruiters and hiring managers to post key openings, as well as access the IntelliMatch resume database for potential candidates.

IntelliMatch's Internet Job/Resume Matching software, based on Oracle Universal Server and Oracle WebServer, has been designed for a heavy transaction load and to support a large number of concurrent users. The company's on-line services currently processes hundreds of thousands of database transactions over the Internet and captures more than 7000 new resumes every month. At the IntelliMatch site, job candidates can use the company's PowerResume on-line form to create structured resumes listing their experience, skills, certifications and work preferences. IntelliMatch's core technology, Precision-Matching, offers the most advanced on-line job matching services on the Internet and ensures the best possible matches for employers and job seekers.

"The Internet has become an essential tool for recruiting," said Ronald Wohl; senior vice president of Oracle Applications Division. "The career fair will attract qualified candidates and match job openings with resumes in the IntelliMatch database."

"Oracle's scalability enables IntelliMatch to match increasing numbers of jobs and resumes, and to capture extensive data on job seekers' skills through PowerResume, our innovative structured resume paradigm," said Francis H. Yu, chief operating officer at IntelliMatch. "With 500 persistent and concurrent connections to the database, Oracle WebServer allows our Web site to support the huge throughput needed to sustain our fast-growing Internet business."

IntelliMatch's Web site utilizes Oracle WebServer which contains the powerful Web Request Broker (WRB), a high-performance environment for linking Web servers to live applications and databases that enables powerful and dynamic transactions over the Internet with unprecedented levels of scalability. The WRB allows users to enhance the traditional functionality of a Web server to create powerful applications using popular, industry-standard development tools. Oracle WebServer's WRB also interoperates with Web servers from Microsoft and Netscape for unprecedented extensibility

To participate in the on-line career fair, interested applicants can enter their resumes at the IntelliMatch Web site, www.intellimatch.com, during the career fair, or reply to Oracle job openings directly. IntelliMatch offers all job seeker services for free.

IntelliMatch has reengineered the time-consuming and costly process of finding jobs and candidates into an easy, efficient on-line process. Using

the power and reach of the Internet, structured data collection, and their unique Precision-Matching technology, IntelliMatch is the #1 Web site for matching job seekers and employers on the Internet. Precision-Matching technology was selected by Human Resource Executive magazine for the 1996 Top HR Product award.

For more information about IntelliMatch, please call 408/494-7200. IntelliMatch's World Wide Web address is <http://www.intellimatch.com/>.

Oracle Corporation is the world's leading supplier of software for information management, and the world's second largest software company. With annual revenues exceeding \$4.8 billion, the company offers its database, tools and application products, along with related consulting, education and support services, in more than 90 countries around the world.

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Key competencies are measured by work-relevant questionnaires

Anonymous

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PEJOAA ISSN: 0031-5745 JRNL CODE: PEJ

DOC TYPE: Journal article LANGUAGE: English LENGTH: 2 Pages

WORD COUNT: 703

ABSTRACT: Work-relevant personality questionnaires have a proven track record of helping employers determine if an individual has what it takes to be an effective manager. Like any form of assessment, personality questionnaires vary in their reliability, validity, usefulness and effectiveness. The Occupational Personality Questionnaire (OPQ) is the test of choice for over 2,000 organizations world-wide because it offers extensive features and capabilities far beyond that of other instruments in its class. What sets the OPQ apart from other questionnaires is the OPQ Expert System. This System is a process of analyzing and reporting OPQ data in a format that is useful and relevant for managers and supervisors. One of the major benefits of the OPQ Expert System is its versatility. Employers and managers will find that the information generated by the System provides critical background that can point the direction of many key management decisions, including those in the areas of team building, training and development, selection and leadership identification.

TEXT: That's right! Work-relevant personality questionnaires have a proven track record of helping employers determine if an individual has what it takes to be an effective manager.

In-depth research has concluded that at least five global categories of personality-based behaviors are linked to management performance and success. By measuring specific aspects of these global areas such as interpersonal relations, thinking style, and feelings and emotions, a personality questionnaire can generate critical information about an individual. This data can be then compared to that of other successful managers.

For example, a personality questionnaire can determine if a person is persuasive, controlling, independent, practical, democratic, conceptual, detail conscious, achieving, critical, decisive... plus many other characteristics that are relevant in a management position.

This assessment capability enables organizations to select candidates most likely to succeed at managerial positions, identify the training and development needs of key managers and build effective and productive work teams.

OPQ: The Work Relevant Personality Questionnaire

Like any form of assessment, personality questionnaires vary in their reliability, validity, usefulness and effectiveness. Therefore, careful consideration should be given when selecting a personality questionnaire.

The Occupational Personality Questionnaire(R)(OPQ) from Saville & Holdsworth Ltd is the test of choice for over 2,000 organizations world-wide because it offers extensive features and capabilities far beyond that of other instruments in its class.

OPQ's success in the workplace is attributed to its roots: it was developed in conjunction with 56 major corporations during a four-year period of intensive research and testing. Since it was first published in 1984, OPQ has been administered in hundreds of thousands of situations. It meets all of the professional guidelines established for test construction and it complies with EEO criteria for use in employment screening.

The OPQ Expert System Provides A Wealth of Information

What sets the OPQ apart from other questionnaires is the OPQ Expert System. The Expert System is a process of analyzing and reporting OPQ data in a format that is useful and relevant for managers and supervisors.

Specifically, the Expert System individual report is based on thirty personality dimensions that are clearly related to managerial performance. This analysis is accompanied with a narrative report which explains the OPQ results in jargon-free, easy-to-understand language. And, it compares the individual's personality traits to those of over 10,000 middle and senior level managers.

OPQ Expert System reports can be generated in less than one minute using the personal computer version. The reports are also available by mailing or faxing test scores to SHL's scoring bureau service.

The OPQ Expert System is a Valuable Tool for a Variety of Applications

One of the major benefits of the OPQ Expert System is its versatility. Employers and managers will find that the information generated by the Expert System provides critical background that can point the direction of many key management decisions, including those in the following areas:

*TEAM BUILDING

OPQ scores can be used to **match** compatible **personality traits** among **employees** that will be working together in a group. The result is a more cohesive and effective work team.

*360deg-FEEDBACK

The OPQ Perspectives, a companion instrument, provides a vehicle for collecting feedback from an individual's peers, managers and subordinates. This data, when integrated with the personality analysis, creates a more comprehensive and accurate profile of the individual.

*TRAINING AND DEVELOPMENT

Results generated by the OPQ Expert System help identify an employee's strengths and developmental needs. This knowledge is useful for planning training programs aimed at strengthening weaknesses and for directing employees into areas that capitalize on their strengths.

*SELECTION

An applicant's OPQ scores can be compared with critical job competencies of successful performers, enabling organizations to select the best candidate for a position.

*LEADERSHIP IDENTIFICATION

The OPQ Expert System highlights various personality traits that determine an individual's leadership or subordinate styles. By identifying leadership qualities, individuals who have management potential can be coached to assume future responsibilities.

A Simple Way to Achieve Greater Management Effectiveness

The OPQ was developed specifically for use in a business setting. It's quickly administered and scored, results can be generated automatically, and it provides a wealth of information that can be used in a variety of situations. Simply stated, the OPQ is a simple and inexpensive way to predict job performance.

THIS IS THE FULL-TEXT. Copyright Personnel Journal 1994

DESCRIPTORS: Human resource management; Questionnaires; Personality; Job analysis; Management development

CLASSIFICATION CODES: 6100 (CN=Human resource planning); 2500

(CN=Organizational behavior)

01135053 97-84447

Interactive job service offered by newspapers

Santoro, Elaine

Direct Marketing v58n8 PP: 11 Dec 1995 CODEN: DIMADI ISSN: 0012-3188

JRNL CODE: DIM

DOC TYPE: Journal article LANGUAGE: English LENGTH: 1 Pages

WORD COUNT: 199

ABSTRACT: CareerPath.com, launched by 6 of the US' largest newspapers, intends to be the leading interactive marketplace for employers and job seekers.

TEXT: Comprehensive national interactive employment service offered by six of the nation's largest newspapers. CareerPath.com, launched by The Boston Globe, Chicago Tribune, Los Angeles Times, The New York Times, San Jose Mercury News, and The Washington Post, intends to be the leading interactive marketplace for employers and job seekers by providing the most "robust" offering of job listings from across the nation.

The service combines the help wanted ads from the six founding newspapers into a single database that is now accessible through CareerPath.com home page (<http://www.careerpath.com>) on the World Wide Web.

In time, CareerPath.com intends to introduce a comprehensive package of related employment services for job seekers and advertisers. The service will offer a resume database, searching capabilities, employer/job seeker matching services and company profiles. Also available will be "alerts," which will allow the employer or job seeker to be notified any time a candidate or job opportunity with a certain profile comes on the market.

Advertisers will eventually be able to place ads exclusively on CareerPath.com. without purchasing a print ad. Each newspaper will determine its own pricing structure for inclusion of print ads on CareerPath.com home page and will also set its own prices for "Internet-only ads."

THIS IS THE FULL-TEXT. Copyright Hoke Communications Inc 1995
GEOGRAPHIC NAMES: US

DESCRIPTORS: Service introduction; Newspapers; Classified advertising
CLASSIFICATION CODES: 9190 (CN=United States); 7200 (CN=Advertising); 8690
(CN=Publishing industry); 9000 (CN=Short Article)

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DIALOG(R)File 233:Internet & Personal Comp. Abs.
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Working the Net

Kwon, Regina

PC Magazine , May 27, 1997 , v16 n10 p40, 1 Page(s)

ISSN: 0888-8507

Company Name: E-Span; MBA Interim Solutions; Individual Software

Product Name: E-Span; MBA Interim Solutions; ResumeMaker Deluxe

Languages: English

Document Type: Product Announcement

Hardware/Software Compatibility: IBM PC Compatible; CD-ROM Drive

Geographic Location: United States

Announces three employment programs designed for the Internet. E-Span (\$NA) (317) uses Oracle database technology for searching and matching positions to job seekers. It offers employment-ad templates for more than 200 disciplines and provides a voluntary personality-assessment test to applicants. It also offers a service that matches resumes with a company's candidate profile. MBA Interim Solution (201) provides a database of job candidates from a list of the 37 top business schools in the U.S. and Europe. It offers companies a free six-month trial membership. ResumeMaker Deluxe (\$40) from Individual Software (510), a resume preparation program on CD-ROM, has added the capability of posting a resume to the databases of most major online resume banks. It also searches listings of online employment service by location, job title, and salary. Includes two illustrations. (djd)

Descriptors: Employment; Database; Internet; CD-ROM; Human Resources
; Online Information

Identifiers: E-Span; MBA Interim Solutions; ResumeMaker Deluxe;
E-Span; MBA Interim Solutions; Individual Software

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01602204 02-53193

A few good employees

McCune, Jenny C

Management Review v87n4 PP: 38-40 Apr 1998 CODEN: MRVWDJ ISSN:
0025-1895 JRNL CODE: MRV

DOC TYPE: Journal article LANGUAGE: English LENGTH: 3 Pages

WORD COUNT: 1781

ABSTRACT: Companies are increasingly turning to technology to improve their screening and evaluation of job candidates. The software solutions in this area range from programs that automate and manage the flood of resumes prompted by electronic job postings to software applications that evaluate job candidates' skills and personality traits. All can help streamline the process, lower costs and reduce turnover. For the past 18 months, USWeb, an Internet development company, has used CareerBuilder Inc.'s TeamBuilder to automate and manage its electronic recruitment process. Some companies use PaperMaster Live to scan resumes into their computers. Aspen Tree Software has a Windows-based program, called ApView, that gathers resume information electronically. Other software-based recruitment tools are discussed.

TEXT: Headnote:

The tough job of recruitment is simplified with screening and evaluation software.

In a tight labor market, it's not the job hunt that's hard. Finding someone to hire is the difficult part. The reasons are plentiful, even if the job candidates aren't: The United States currently has the lowest unemployment rate since 1973, employees are switching jobs more frequently and the Internet's job sites, which give companies more candidates to choose from, also give HR managers more resumes to screen.

In light of these trends, companies are turning to technology to improve their screening and evaluation of job candidates. The software solutions in this area range from programs that automate and manage the flood of resumes prompted by electronic job postings to software applications that evaluate job candidates' skills and personality traits. All can help streamline the process, lower costs and reduce turnover.

For the past 18 months, USWeb, an Internet development company, has used CareerBuilder Inc.'s TeamBuilder (\$7,200 and up) to automate and manage its electronic recruitment process. The fast-growing company needed help for good reason: Over the past two years, it has grown from 20 employees to 650. Admittedly, many of those new employees came from USWeb's acquisitions, but the Santa Clara, Calif., company is always in need of people to fill new positions.

Most of USWeb's recruitmentsome 75 percent to 80 percent-is done electronically. The process starts when USWeb composes a job posting. The TeamBuilder program, which recognizes 47 different word-processing formats, automatically places the ad on the Websites specified by USWeb, including its own site and major job sites such as MonsterBoard, CareerMosaic and CareerBuilder.

The software then updates ads and removes them when positions are filled. "This alone makes it worthwhile," says Josh Goldman, USWeb's vice president of business solutions. "Before, our webmaster had to do this all manually and when he had the time."

TeamBuilder also traffics resumes. It automatically distributes them by computer to the HR staff and the hiring manager, who can make notes on the resume electronically. For example, they might indicate whether the job candidate has been contacted, what the manager thinks of the candidate and so forth. "Before, you could never find what you needed when you needed it," Goldman says. "People tended to get lost in the system. That doesn't

happen anymore.

In addition to helping distribute and track resumes, TeamBuilder analyzes the hiring process so that companies can improve their recruitment methods. The software can determine which job site yielded the most leads and whether a specific position is being filled faster. "It's really streamlined our job-posting and resume management, Goldman says.

"TeamBuilder is really the center of e-cruiting," says Rob McGovern, president and CEO of CareerBuilder, Reston, Va. "What it's all about is converting what is normally a very paper- and time-intensive task into a more frictionless electronic process." A process that used to stretch out over days now can take hours, McGovern says.

Another resume database-management system is HirePoint (\$2.50 per processed resume), made by HireSystems, a Waltham, Mass., subsidiary of Kaplan Educational Centers. HirePoint's twist: its approach to sorting and tracking resumes is entirely Web-based.

A company logs on to HireSystems' Website and downloads resumes. HireSystems provides all the hardware, software, database management, resume processing, telecommunications links and security controls.

For companies seeking a more affordable, but less customized, method of simply tracking resumes, there's PaperMaster Live, a \$149 document-management program from JetFax Inc., San Jose, Calif.

Companies use PaperMaster Live to scan resumes into their computers. The software organizes the resumes into a computerized, "filing cabinet" database with drawers and folders so that HR managers can perform simple word searches, such as entering "Java" to find a programmer with experience in that hot Web-programming language.

(Illustration Omitted)

Captioned as: HirePoint, a resume database-management system, sorts and tracks resumes downloaded from the Internet.

Beyond the Resume

Some software developers believe the electronic-recruitment process needs to go beyond the traditional resume in collecting information on job candidates.

Aspen Tree Software, an SHL company based in Laramie, Wyo., has a Windows-based program, called ApView, that gathers such information electronically. ApView is an electronic employment application that's filled out by job seekers. What makes it special is that Aspen Tree designs the application for each job and company. Its electronic quizzing also determines whether a candidate has the personality traits and expertise required.

ApView isn't meant to replace the hiring manager, but rather to help prescreen applicants and reduce the time needed to fill a position. "The computer gathers information about a candidate's knowledge, skills and abilities so that interviewers can make an initial evaluation, sift through the vast body of information almost instantaneously and select the top 10 to 20 percent of their applicant pool," says Brooks Mitchell, Aspen Tree's president. "Then they spend their face-to-face time in interviews with only those applicants who are more qualified to fill their positions."

Aspen Tree also evaluates a client's hiring process after ApView (or its Internet equivalent, ApView Net) has been installed to determine whether employee turnover and job performance have improved. If not, Aspen Tree further tinkers with ApViewadding, subtracting and rephrasing questions-to accomplish those goals.

Like many customized programs, ApView doesn't come cheap: Prices range from

\$50,000 to \$95,000. The Internet version, which uses mathematical and statistical models to rank and score candidates on skills, starts at \$150,000.

Aspen Tree also has a computer-assisted, telephone-screening system, CAPS, that presents an employment quiz to job seekers for screening purposes and then schedules appointments. It's designed for companies that have high-volume staffing needs, such as a supermarket chain.

Timesaving Screening

Computers are assisting companies with the candidate-evaluation process in other ways as well. Call centers at Cigna Healthcare, the healthcare-benefits arm of Cigna Corp., Hartford, Conn., used to rely on a labor-intensive and expensive process to test prospective customer-service reps. The company now opts for a computer solution devised by Purdue University, Lafayette, Ind.

(Illustration Omitted)

Captioned as: ApView helps gather information on job candidates and screen applicants for managers.

Before JASS (Job-Application Screening System) was installed last year, Cigna Healthcare would read scripts of call-center vignettes (such as handling a question, problem or complaint) to job candidates, who then selected their responses from a menu of answers. "It was very labor-intensive," says Martine Maness, an HR consultant involved with hiring for Cigna Healthcare's largest call center in Charlotte, N.C.

With JASS, job candidates take a similar test, but this one is computerized. Applicants input their responses directly into a PC, and the test "evolves" as they respond. This feature makes it much more sophisticated than the original test. The program serves as a prescreening device, shrinking the jobapplicant pool to a manageable level so that the company can schedule interviews, Maness says.

Other benefits: JASS measures productivity by tracking response times and tallying keystrokes. It also allows the call centers to test up to 30 people at a time and generates much less paperwork because the test data are kept on computer disks. JASS costs \$5,000 up front and a \$15 per applicant fee. It is marketed by Multimedia Magic, West Lafayette, Ind.

Another job-candidate evaluator is DPDAplicant from Decision Point Data (DPD), Tualatin, Ore. What's different about DPDAplicant is that job candidates fill out an application using a screen phone (a phone with a LCD display). The information is uploaded to DPD's mainframe and processed. A report is then faxed or e-mailed to the employer within 10 minutes.

Like the other screening and evaluation programs described here, DPD gathers criteria from its clients to design a custom job application that documents skills, experience and personality traits, such as whether a person is outgoing and would make a good salesperson. But the software's pricing is similar to that of cable TV. Customers get the screen phone for free, then pay a flat fee of \$150 a month for application processing.

Of course, DPDAplicant's judgment of a candidate doesn't supplant that of the hiring manager. It simply supplements it. "It's like an airplane pilot. He's surrounded by equipment-computers-telling him all sorts of things, but it's the pilot who makes the decision," says Deme Clainos, DPD's vice president of marketing and business development.

DPDAplicant points out any omissions or "red flags" on a job application that might be missed by a harried manager looking through hundreds of employment forms. It also asks questions that are difficult for a manager to ask of an applicant. "It's usually easier for a person to answer the form instead of a person," Clainos says.

Coffee People Inc., a chain of 62 coffee bars based in Beaverton, Ore., has

tested DPDApplciant. Although some of Coffee People's managers have found it difficult to adapt to a computer program in the evaluation process, the company has been pleased with the results so far. The outlet using the software the most has half the turnover of other Coffee People stores, says Matt Kimble, vice president of human resources.

"What got our attention [with DPDApplciant] is the cost of recruitment and training. If you can reduce it just by a little bit, you can have huge dollar savings," Kimble says. "This also gives us a consistent interview process, which we think is important."

Two other evaluators are SelecSys, a program developed by Management Recruiters International, Cleveland, and Recruit Right (\$10,000 and up) from Microhard Technologies Inc., Oak Brook, Ill. Both programs work by computer rather than by screen phones. SelecSys is licensed to companies on a sliding scale based on company size, starting at \$5,300 (for 25 or fewer employees) and going up to \$41,000 (for more than 500 employees).

Online job sites are also looking into how they can help companies evaluate job applicants. E.span, for example, was scheduled to roll out a personality trait test, the Caliper Preferences Index, in February. Job seekers take the optional test, preview their scores and decide whether or not to pass along the results. E.span charges employers \$100 to view the data for each position.

(Illustration Omitted)

Captioned as: SelecSys is a program that streamlines the screening process.

Will your next job interview be conducted by a computer? It's unlikely. Even the best of these programs can't replace a manager's intuition about a job candidate. What the programs do is make the hiring process more efficient-and the process of finding a few good employees less of a struggle.

Sidebar:

RESOURCES

Sidebar:

Aspen Tree Software
<http://www.aspentree.com>

CareerBuilder Inc.
<http://www.careerbuilder.com>

Decision Point Data
<http://www.decisionpointdata.com>

E.span
<http://www.espan.com>

Management Recruiters International
<http://mrinet.com/rightft.html>

Microhard Technologies Inc.
<http://www.microhard.com>
Author Affiliation:

Jenny C. McCune is a journalist based in Bozeman, Mont. Seen any interesting technology lately? Drop Ms. McCune a line at her e-mail address

of JennyM3798@aol.com

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COMPANY NAMES:

Aspen Tree Software Inc

CareerBuilder

E-Span Inc

Management Recruiters International Inc (DUNS:04-408-6841)

MicroHard Technologies

GEOGRAPHIC NAMES: US

DESCRIPTORS: Software packages; Recruitment; Manyproducts; Manycompanies

CLASSIFICATION CODES: 9190 (CN=United States); 6100 (CN=Human resource
planning); 5250 (CN=Telecommunications systems); 9120 (CN=Product
specific)

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**Networking on the 'net
Computerworld Campus Edition**

**Forget all the newspapers' want ads. On-line job search services are fast
becoming a way to find jobs and connections**

Byline: Steve Alexander

Journal: Computerworld Page Number: 68

Publication Date: October 31, 1995

Word Count: 923 Line Count: 86

Section Heading: Job Hunt

Caption(s): illustration, source: David Fremont

Text:

Job Hunt

Are you looking for a job? Don't pass up the Internet and on-line services, where an estimated 20,000 jobs are posted and new ones appear daily. While a relatively small percentage of technical and engineering students are seeking employment on-line (best estimates place it at between 20% and 50% for the population) those who are, say it's a gold mine of opportunities. For example, the Career Planning and Placement Center at Stanford University provides its students with a **list** of Internet job resources that includes 28 sites on the World Wide Web and 26 news groups. On-line services such as America On-line and Compuserve also have job databases. Students can respond to job postings by sending their resumes via E-mail, or just talk to other students about job hunting through on-line chat rooms. Companies can either wait for responses to their on-line job **listings** or search on-line resume postings for likely candidates. There's a variety of approaches students can take to an on-line job search. Stanford grad student Ranjini Ramachandran found her networking job at Sun Microsystems, Inc. through Internet job **listings**. She says she can't imagine looking for employment any other way. "Usually after I found something interesting and sent in an electronic resume, I'd get a call a couple of days later. I never had to print out a copy of my resume," says Ramachandran, a statistical computing student before becoming a member of Sun's networking technical staff. She used a San Francisco Bay area jobs news group (ba.jobs.offered) and an Internet Web site (<http://www.careermosaic.com/>) to find a job. Then there's Vaskin Kissoyan, an undergrad at Christian Brothers University in Memphis, Tenn., who posted his resume on his own World Wide Web home page on the school's server. He plans to add his own database search program to increase its appeal. "You need to make your page attractive and innovative enough so it gets on the 'cool site of the day' **list** at Netscape or some other place where there are a lot of user hits," he says. A different category "There are probably 20,000 jobs on-line today on the Internet and the on-line services combined. It's a vehicle to look for jobs that not everybody else is using, so it puts you in a different category," says Mike Rowe, marketing director for E-Span, Inc., in Indianapolis. E-Span **lists** 4,500 mostly technical and engineering jobs on the Internet's World Wide Web. E-Span also maintains a resume database that charges corporations to search. And, beginning this fall, ~~E-Span plans to offer a service that matches resumes to new job listings and sends lists of potential employers to job seekers daily.~~ America On-line and Compuserve also **list** jobs, nearly five times as many **listings** as they offered a year ago. Companies are finding that on-line advertising is an increasingly important way to recruit university students. But most are so new at it that they don't keep statistics on the number of hires they make through on-line job postings. "I think we are definitely going in that direction, because every day I get resumes from the Internet," says Christine Leonardo, a recruiting specialist for strategies and programs at Cambridge, Mass.-based Lotus Development Corp., now a wholly owned subsidiary of IBM. "The types of jobs we **list** on-line are mostly consulting services and technical support jobs, but we also post finance and marketing jobs." "At present, we are using the Internet only as a way to search for resumes. We don't post anything there," says Richard Nordtvedt, senior manager of development services in the information telecommunications division of

Memphis-based Federal Express. "But going forward I see this as a tremendous way to hire people." "It's a little early to know if people are getting jobs through the Internet . . . But there's growing interest among **employers** about getting on Jobweb (<http://www.jobweb.org/>), and it's being used by students and career centers," says Steve Miller, a spokesman for the National Association of Colleges and **Employers** in Bethlehem, Penn. Jobweb is run by the nonprofit association that represents 1,400 employment recruiting firms and 1,600 college placement centers. Here are some tips for job searching on-line: When you E-mail your resume, be sure it contains the same key words as the **job posting** to which you're responding. For example, include the names of hardware platforms, software skills or job titles, such as LAN administrator, that the posting mentions. Resumes probably will be computer-searched for key words; only those that contain the right words are likely to be read, Rowe says. Remember that E-mail is almost instantaneous. A job seeker should follow up new leads quickly, because a fresh posting may draw a flood of resumes in just a few hours. Putting your electronic resume in a database is not enough. You must actively pursue job leads by sending your resume out via E-mail. "Some students assume because they are technologically savvy, people will come to their door. But it's not that way," Rowe says. Read about potential **employers** on their Web pages before interviewing, advises Colm Lysaght, an electrical engineering graduate student and former chairman of the student IEEE chapter at Stanford. Some home pages also **list** job openings. Don't forget the personal touch. "Sending a resume electronically is just the beginning of the process. It should be followed up by letters and phone calls," Lysaght adds. Some Web Sites On-line Career Center (<http://www.occ.com>) Jobweb (<http://www.jobweb.com>) The Interactive Employment Network (<http://www.espan.com>) Employment Edge (<http://sensemedia.net/employment.edge>) Catapult (<http://www.wm.edu/catapult>) Career Magazine (<http://careermosaic.com>) Recruiters OnLine Network (<http://www.onramp.net/ron/>)@END \$\$ SL

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01054168 01078470 (THIS IS THE FULLTEXT)

Job Search Sites on the Web

(The Web has become a source of information regarding job searches as well as resume writing)

Article Author(s): Raeder, Aggi

Searcher, v 5, n 6, p 60-65

June 1997

DOCUMENT TYPE: Journal; Guideline ISSN: 1070-4795 (United States)

LANGUAGE: English RECORD TYPE: Fulltext; Abstract

WORD COUNT: 3075

ABSTRACT:

Job search sites on the World Wide Web are presented. The Riley Guide: Employment Opportunities and Job Resumes on the Internet (<http://www.jobtrak.com/jobguide/>) organizes linkages by geographic regions and career field. This site has garnered several awards from Web site raters. Career Mosaic (<http://www.careermosaic.com>) permits offers searching on job titles. Job hunters can search all the job-related Usenet newsgroups using their own keywords. More than 40 newspapers have merged their classified jobs advertisements in Career Path (<http://www.careerpath.com>), while Head Hunter (<http://www.headhunter.net>) searches on pay level and cities. The company database by type of industry and region can be searched at Nation Job Network (<http://www.nationjob.com>). Federal Government Jobs at <http://www.usajobs.opm.gov>, lists current jobs with a proficient search menu. Job searchers can apply for a job on the Web site itself. Searchers at Web Interactive Network of Government Services (WINGS) at <http://www.wings.usps.gov>, can connect local, state and federal jobs, while the menu searching of America's Job Bank (<http://www.ajb.dni.us>) provides competent and successful retrieval. Article lists professional and boutique job sites.

TEXT:

by Aggi Raeder

Information Consultant

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Maybe you want a job that pays better. Maybe your kid/husband/boyfriend/buddy is looking for a job. Maybe your company undergoes downsizing and the human resources department wants help in outplacement or soon-to-be-former clients start asking you for assistance. Maybe your company seeks qualified new hires with specialized skills. There are many reasons why you should know about the job search resources on the Internet. Viewing the Internet as a vast publishing enterprise, cybernauts can use the Web's potential for quick updating and broad reach to search for the right job or job applicant.

Headhunters and employment agencies have begun to understand the Internet well enough to use it to reach larger pools of applicants and fill their openings quicker and cheaper than ever. In some cases, job Web sites are owned by employment agencies who, by charging employers placing ads, have simply moved to an electronic form of doing business.

Not all job sites work the same, of course. Searching features vary tremendously. It's my impression that the mega job boards have inadequate search tools because they really don't think very much about whether or not they serve the needs of the job seeker. They don't charge job seekers to look for job opportunities, though, in some cases, they charge to place resumes on their Web site. The employer, on the other hand, definitely pays a fee to search applicant resumes, and also pays a hefty fee to display as "featured employer" or have their company home page linked from specific job descriptions. So why do employers that pay seem willing to suffer with inadequate search software as they review incoming resumes? A conversation

with one employer suggested that employer participation in these mega job boards may relate more to their employment office's need to reduce the pressure of telephone and applicant interfacing. If they can refer the hoards of undefined and possibly unqualified applicants to an Internet job site, they have eased their daily load.

I did find one large job board site (<http://www.headhunter.net>) where job seekers could search a databank of resumes. Looking at resumes and seeing what others have written can teach a job seeker a lot. I would suggest to job board providers that they allow searching of at least a sample of resumes with personal names deleted. They could label them "winning resumes" and choose actual resumes from candidates who have successfully landed a job and have permitted their resume to display in the sample resume databank. ("Got your job through our site? Release your resume and win a T shirt!")

Although this column will focus on job-specific sites, more traditional sources of job listings have also gotten the Web treatment, in particular, newspapers. Not all newspaper Web sites offer classified ads, but enough do to warrant checking. To find newspapers available on the Web around the nation (or around the world), you can start with the newslink megasite (<http://www.newslink.org>). Remember that some "national newspapers" like The New York Times (<http://www.nytimes.com>) may have special listing services that cover professions or industries drawing from a national job market.

Electronic Resumes

Most Web job sites offer extensive advice for job seekers on how to write a resume. For the electronic environment, applicants are urged to refrain from using varied fonts or graphics. Automated retrieval systems at the Web site and also at the employer's Human Resources department scan in the resumes. If the system cannot interpret a scanned document, an employer may never contact the applicant. Further advice for job seekers using Web job boards: Keep your resume short, one page or less. Use key words that the employer may search on, for instance: Novell, UNIX, Windows NT, Foxpro, Sybase, SQL, Dialog, Dow Jones, Medlars, MEDLINE, HTML, Java, Perk Internet, Webmaster, or any jargon words that pertain directly to your skills.

Many of these job and career sites, in addition to featuring job search facilities, may also offer an employer search option -- put in a hot company name and see if they have any jobs to offer. Most also provide links to all sorts of helpful advice for applicants. Even if you don't feel you need this advice, you may find it useful for directing students/customers/users/clients to Web resources they can use. In the list of job sites below I note those that feature useful career, interviewing, and resume writing help.

Remember, these sites may have other tales to tell. Searchers needn't be seeking a job to find these Web job sites productive in the sense of information gathering. If you have responsibility for finding corporate intelligence, viewing descriptions of current job openings may provide hints as to a company's future plans. If you're hiring chefs and busboys and valet parking attendants, can a restaurant be far behind?

Searching Tricks

The larger job boards, crammed with openings from all over the U.S. and beyond, seem a challenge to search successfully. As I suggested before, many of these search systems have extremely inadequate retrieval tools. In cases where you must insert your search words in a generic box, your words could retrieve hits from the job title, job description, employer description, or even the job location. Retrieval from such un-fielded data can result in irrelevant hits.

At those sites where you can insert search words in boxes with field labels

"job title," "location," "keywords," one might hope for better retrieval, but according to my searching, the results seemed equally dismal. A careful examination of job titles retrieved showed that the job titles use uncontrolled vocabulary. For example, look at these job titles I found for employers seeking applicants with online searching expertise:

Business Analyst

Information Technologist

Market Research

Information Specialist

Online Consultant

For those job search Web sites that used a controlled job category list from which the searcher selected jobs, the categories were never specific enough. They seemed a bit broader than the categories used in print newspapers.

In many ways one should view the large job boards as works in progress, with much work still not done. They might serve college grads looking for a first job. They can also serve computer geeks with specific expertise in a specific software, since the keyword search will efficiently dump out jobs for people knowing that software or system.

One obvious employment opportunity these sites seem to have missed. They offer excellent consulting opportunities for information professionals with strong skills in organizing and classifying. The job board sponsors need to realize that their sites need improvement and hire information professionals to improve the search and retrieval for everyone.

JobSmart

Mary Ellen Mort, a public librarian with 15 years experience in helping job seekers find jobs, now serves as Webmaster for JobSmart.org (www.job-smart.org). Although some of her links lead to the large job boards, she suggests the best way to locate a job requires using smaller, boutique job sites -- Web sites sponsored by professional societies, universities, local organizations, or companies. The competition seems less intense, and you can browse a short job list in its entirety. JobSmart offers many of these links, and Mary Ellen works hard to find more. Her site invites users to leave a message. She reports that 90 percent of the messages JobSmart receives come from clueless seekers that approach the automated search task with far less searching skill than those of us in the library or information field. Mary Ellen asserts that as a bare minimum the mega job sites should re-write their help files, making them as entertaining and attractive as the rest of the site.

You may not be in the job market, but need to know how your salary compares, or want to know the going rate for someone you plan to hire. Link to the JobSmart site (www.jobsmart.org) to examine salary surveys by job type, and data on cost of living city by city. Salaries for the similar jobs are not the same for all locations in the U.S. For instance, accountants are paid much more in New York than Arizona.

Beware!

Your current employer can examine each URL that you visit using the company network, whether you know it or not. Prudence suggests that you refrain from job searching on company time and the company network. What to do? Search from home, using your personal account on a commercial service. It's the only wise thing to do. Certainly the boss has other things to do than peruse long lists of employee Internet destinations, but in a case where management scrutinizes your behavior for any reason, looking at your Internet usage may appear a good place to start.

Some mega job boards might want to consider offering other goodies at their site besides job opportunities, for instance, advice on how to hold your job and please the boss. Then a job seeker could claim that they only visited the site to learn how to become a better team player, not a better-off player on another team. But don't count on that to help when you feel the heat. Keep your searching confidential, with any e-mail exchanges going through your personal account from home.

The Unlisted Job Sites

One excellent approach job **seekers** can take targets the job openings **listed** on company Web sites. Of course, you have to know what company you want before you can start looking for their Web site, hoping they have **job postings listed** -- which many do these days. If you select certain **employers** and then visit their Web sites to view **listed** job opportunities, you may find openings **listed** more current than any newspaper or Internet job site. Some job Web sites do link to company job pages, e.g., Internet Business Network (www.inter-biznet.com/hunt/companies.html), Ohio State Business Job Finder (www.cob.ohio-state.edu/fin/jobs/jobshp.htm), and Job Hunt (www.job-hunt.org/companies.html).

photo omitted

To start the hunt for the right company for you, we suggest you try two company search sites that let you search on state plus industry categories (rather than company name): D&B Companies Online (www.companiesonline.com) and BigBook (www.bigbook.com). Remember, neither of these sites link to job opportunities, but just to company name, address and phone number. However, once you have the company name, you can start verifying if they have company Web sites with job postings attached. It's worth a try for job seekers with strong geographic preferences.

Meta Sites -- Linking to Other Job Search Sites

The selected sites listed below represent a fraction of job sites available on the Web. According to Richard Bolles, author of *What Color Is Your Parachute?*, the well-known job hunt advice book, at least 11,000 sites on the Internet deal with jobs, careers, and job-hunting. More join every week. These links were correct as of April 1997.

JobSmart

<http://www.jobsmart.org>

Sponsored by Bay Area Library and Information Systems (BALLS) and KPIX, a Bay Area TV station, this site concentrates on San Francisco Bay area jobs, but includes links to many larger sites. By the time you read this column, JobSmart should have expanded to include Southern California, with Sacramento next on the statewide agenda. Don't miss Mary Ellen Mort's advice on how to use Internet sources to land a job.

Nation Job Network

<http://www.nationjob.com>

Search the company database by type of industry and region; search the job database; ask the Scout to e-mail you any job announcements that **match** your skills.

Yahoo Jobs

http://www.yahoo.com/Businessand_Economy/Employment/Jobs/

<http://classifieds.yahoo.com/employment.html>

The first URL links to executive search firms, job fairs, summer employment, and Usenet job announcements. The second URL searches job

openings very efficiently -- pick your city, then search on a keyword. Many job descriptions have links to company home pages.

Job Hunt

<http://www.job-hunt.org>

Provides breakout of jobs by academia, agencies, science, engineering, medicine. New links and outstanding resources display with tags.

Job Search Tips

Career Builder

<http://www.careerbuilder.com>

Offers a "Personal Search Agent" that will notify you by e-mail when a job with your qualifications arrives. You can have up to five "Personal Agents" with different criteria. This site also has a feature that compares cost of living from city to city.

Dick Bolles' What Color Is Your Parachute: The Net Guide

<http://washingtonpost.com/wp-adv/classifieds/careerpost/parachute/>

Besides promoting Bolles' book, this site offers good job search advice and displays evaluated links.

Mega Job Sites -- Huge Databanks of Jobs

Career Mosaic

<http://www.careermosaic.com>

Employer Web pages show in the job opening display but do not link. This site allows searching on job titles. Job seekers can also search all the job-related Usenet newsgroups using their own keywords.

photo omitted

Career Path

<http://www.careerpath.com>

More than 40 newspapers have combined their classified job ads here. Mark the papers you want to search as a group and go at it.

Career Site

<http://www.careersite.com>

Searchers must use standard job titles to get search results. Retrieved brief job displays do not show date, nor location of job. Too bad!

HeadHunter

<http://www.headhunter.net>

Can search on cities and pay level. Searches are limited to five job categories, but the display does not count how many you have highlighted. One of the few sites where you can search resumes -- an excellent way to view the competition.

Intellimatch

<http://www.intellimatch.com>

At this site you select job categories from one display and your target state from another display. If your search turns out too broad and overloads the system, nothing will display.

Monster Board

<http://www.monster.com>

Job openings display in date order, latest first. Clicking on employer link does not take you to their home page, but to a list of other openings they have on the Monster Board system. The Board offers to search Usenet news-groups but this feature did not work when I visited the site. You search by highlighting job categories from a long display. If you return to search again, the highlighted job categories do not clear automatically, nor is there a clear button. The user must roll down the display to individually clear unwanted categories. Poor design!

Online Career Center

<http://www.occ.com>

Search keywords apply to the entire record, resulting in many irrelevant retrievals. You cannot search on geographic location, but a retrieved brief list displays in date order with the locations showing.

The Riley Guide: Employment Opportunities and Job Resumes on the Internet

<http://www.jobtrak.com/jobguide/>

This oldest and best job site is rated tops by Bolles (the Parachute man) and Interbiznet and has gained many awards from Web site raters. Riley organizes links by career field and geographic regions.

E-span Interactive Employment Network

<http://www.espan.com>

Another site where your search words apply to the entire record, with no searching of specific fields (like, how about the job title?). After completing a search there appears no way to link back to Home. Weird! E-Span offers to post your resume to Usenet newsgroups. Don't miss their links to personality tests. They are not necessarily focused on the job seeker, but are lots of fun.

Job Bank USA

<http://www.jobbankusa.com>

This system can search on both job description keywords and job title words. The brief retrieved display shows date, state, job title, salary, and status of employment -- permanent or contract.

photo omitted

Professional and Boutique Job Sites

American Institute of Chemical Engineers (AIChE)

<http://www.aiche.org/employment/>

The Association site offers both members and non-members a Career Fair, employment clearinghouse, resume referral service, and advice on consulting.

American Records Management Association

<http://www.arma.org/hq/jobsmain.html>

Jobs posted here only remain for three weeks. Better visit frequently to have a chance.

American Association of Law Librarians

<http://www.aallnet.org/services/hotline.html>

Only very current openings list here. Better check back often since they update daily.

American Chemical Society Jobbank

<http://pubs.acs.org/plWeb/indexpl.html>

This job board restricts to ACS members only. The job listings update weekly and show jobs that will appear in the most recent issues of Chemical and Engineering News.

American Institute of Biological Sciences

<http://www2.aibs.org/aibs/careers.html>

This site has gathered a number of job-related links for biologists and life scientist types.

American Library Association

<http://www.ala.org/education/>

Displays the very latest jobs from American Libraries and C&RL NewsNet. The jobs show here before they see print in these publications. You need to visit often to beat out the competition.

American Water Works Association

<http://www.awwa.org/>

For water quality and water Supply experts, this site displays very current listings -- 14 days only.

Association of Research Libraries

<http://arl.cni.org/careers/vacancy.html>

Take a look at their very detailed job descriptions. You can search by type of job or select "entry level."

Association for Computing Machinery

http://www.acm.org/member_services/career/

Offers a resume referral service, career advice, and job list. Many of the openings show academic jobs, but not all.

Aviation/Aerospace Jobs Page

<http://www.nationjob.com/aviation>

A very extensive set of links to available aviation jobs updated weekly.

Entertainment Recruitment Network

<http://www.showbizjobs.com>

They say it's tough to break into show business at any level, but this surely will help. It covers film, TV, recording, multimedia, and theme parks, including internships (unpaid!).

IEEE USA Job Listing Service

<http://www.ieee.org/jobs.html>

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If you want a job in electrical engineering, try this site.

Interbiznet

<http://www.interbiznet.com/eeri/hunt/map.html>

A great list of rated job search links, grouped and organized by the type of sponsor of the site.

Medical Librarians Association

<http://www.kumc.edu/MLA/jobs.html>

This very current listing groups by state. Each job description includes salary range.

Monster Board's MedSearch

<http://www.medsearch.com>

You can select from 50 discipline categories and then search on keywords, but not on position title.

Society of Photooptical and Instrumentation Engineers (SPIE)

<http://butler.spie.org/employment/employmentforum.qry>

Scan jobs by state and view resumes.

Software Jobs

<http://www.softwarejobs.com>

Visit here to read the great tips for a successful interview, including the telephone interview and how to "talk money."
Special Libraries Association

<http://www.sla.org>

You must have SLA membership to view the many current job listings. Search by state and salary range.

Government Jobs

Federal Government Jobs

<http://www.usajobs.opm.gov>

The U.S. Office of Personnel Management provides this great compilation of current jobs, including summer jobs, with a competent search menu. You can apply for a job right from the Web site. Visit often.

Web Interactive Network of Government Services (WINGS)

<http://www.wings.usps.gov>

Visit this site to link to federal, state and local jobs as well as other government services a citizen needs.

America's Job Bank

<http://www.ajb.dni.us>

Search for a job offered by any or all state employment departments. Explore the links to state, city and local government jobs from AJB. The menu searching offers efficient and successful retrieval.

Work in Progress

Job listings via the Internet are a new and growing phenomena. Enjoy the benefits they bring to the hassle of job searching, and when you find a site that serves up inadequate search and retrieval, leave a feedback e-mail to let them know.

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CONCEPT TERMS: Human Resources; Information Technology; Internet; Job hunting; Technology application

GEOGRAPHIC NAMES: United States (USA)

12/9/17 (Item 14 from file: 13)

DIALOG(R)File 13:BAMP

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Find IT People Online

(In the rush to fill IT positions, the Internet is becoming more popular as a way to recruit personnel)

Article Author(s): McGee, Marianne Kolbasuk

Information Week, n 606, p 188

November 18, 1996

DOCUMENT TYPE: Journal ISSN: 8750-6874 (United States)

LANGUAGE: English RECORD TYPE: Fulltext; Abstract

WORD COUNT: 378

ABSTRACT:

Employment services and **job postings** are increasing on the Internet, making it an effective means to fill IT positions. Online services such as resume banks and search engines help **match** candidates with jobs. NetStart Inc.'s TeamBuilder is an online recruitment management software that enables **employers** to make **job postings** over the Internet, and search and route resumes to IS managers. The software's e-mail helps managers measure their recruitment efforts while notifying candidates that their resumes were received. NetStart also offers CareerBuilder, a Web site where TeamBuilder users can **list** job openings. The site is linked to CareerMosaic and MonsterBoard, two large job-search services that are frequented by technology professionals. Article includes testimonies from TeamBuilder users.

TEXT:

Net-based software speeds searches by **matching** jobs and candidates

The Internet is becoming increasingly popular in the rush to fill IT positions. Hundreds of employment services now offer help on the Internet, not to mention the daily job postings found on thousands of companies' Web pages.

Included among the online services are resume banks and fancy search tools that help **match** -making between candidates and jobs. Among the newest products is a job-hunt service that uses workflow software to simplify online recruiting and improve communication among online job candidates, human resource specialists, and technology managers.

photo omitted

TeamBuilder is online recruitment management software from NetStart Inc., a Reston, Va., developer. It includes tools for employers to quickly build job postings over the Internet, as well as search and route resumes to IS managers.

TeamBuilder E-mail lets candidates know that their resumes were received and helps managers measure their recruitment efforts. The software lets recruiters make their own notations on resumes, so that that information can be passed on.

Christi Cameron, a human resources specialist who recruits technology talent for Best Software Inc., a financial-applications developer, also in Reston, says TeamBuilder has helped her save as much as 50% of the time needed to search for job candidates using more traditional methods.

"Those other methods can take weeks of planning, while I can create, edit, and post a job opening on the Internet with TeamBuilder within 15 minutes," says Cameron. "As a result, we can attract candidates that much faster."

NetStart offers CareerBuilder, a job-search site that includes a cross-company database listing job openings of TeamBuilder customers. It also has a link to CareerMosaic and Monster Board, two large job-search Web services popular with technology professionals.

Judy Hodges, a senior analyst who follows online solutions for research firm International Data Corp. in Framingham, Mass., says TeamBuilder is the first workflow online recruitment product she's found.

"Communication improves with this workflow tool, and the whole hiring process gets speeded up," she says.

Hodges predicts that nearly all of companies will have Web recruitment efforts by 2001. She also estimates 54% of companies use the Internet for electronic job postings. Technology workers are among those people who most frequently use Web employment services, since they typically have easy access to the Internet.

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COMPANY DEPARTMENT NAME: Human Resources; Information Technology
CONCEPT TERMS: Human Resources; Information Technology; Internet;
Recruitment; Technology application
GEOGRAPHIC NAMES: United States (USA)

DIALOG(R) File 13:BAMP
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10 Easy Tips for Recruiting Online

(Pointers on how to build effective & lasting Internet recruiting center include considering if one really needs a Web site, determining what to communicate online, and deciding how high-tech the site will be)

Article Author(s): Klau, Ben; Williams, Mark

Workforce Staffing Supplement, v 76, n 8, p 13-18

August 1997

DOCUMENT TYPE: Journal; Guideline ISSN: 1092-8332 (United States)

LANGUAGE: English RECORD TYPE: Fulltext; Abstract

WORD COUNT: 2002

ABSTRACT:

Pointers are given for recruiting online. First, an evaluation must be carried out as to whether the company really needs a Web site. Second, the company must consider how it will communicate and how it will accomplish that objective. Visitors should be able to review the postings and apply online, and prospective recruits must be provided with some kind of electronic application process. Third, the human resource (HR) department and hiring managers must be involved in updating the Web site. Fourth, a decision must be made as to how technologically proficient the site should be. Not everybody will be accessing the site through high speed integrated services digital network (ISDN) or T1 lines. Nontechnical visitors or surfers may use instead a range of browsers. Fifth, the site must contain something of value and substance. Sixth, the efforts in putting up the site must be coordinated with the communications and marketing department. Eighth, relationships must be built with job seekers. Ninth, visitor feedback must be listened to and learned. Article discusses other relevant pointers.

TEXT:

By Mark Williams and Ben Klau

Building a recruitment center within your company's Web site is a popular way of increasing the visibility of job announcements at a reasonable cost. But posting a job online is not as simple as running a classified ad in your local paper. Two experts in online recruiting offer these tips to help you get started.

So you've decided to expand your company's Web site to include recruiting capability. Or maybe you're just taking your first steps toward setting up the heavily traveled information superhighway. Either way, before plunging head first into cyberworld, here are a few pointers on building an effective and lasting Internet recruiting center.

Tip One: Consider whether you really need a Web site. If you're not yet convinced that you need a corporate Web site, consider this fact: According to the 400 HR professionals who in the past two years have participated in Austin Knight's "Internet Recruitment Survey" (which you can view online at www.austinknight.com), the number of companies with corporate Web sites has jumped 400 percent since 1996. Unlike the early days of Web recruiting, when most recruiters took their first cybersteps via a third-party career hub like On-line Career Center (www.occ.com), today's successful cyber-cruiters also are incorporating online recruitment pages into their corporate Web sites. In fact, nearly 70 percent of respondents to the Austin Knight survey reported that corporate homepages are effective places to recruit candidates. Only half that number said career hubs were equally effective. It's clear that you need to include your company homepage if your goal is a well-rounded online recruiting strategy.

If you're lucky enough to work for a well-known organization--like Federal Express Corp., Digital Equipment Corp. or Yahoo!--chances are your company homepage is drawing significant online traffic from customers and vendors. So you'll want to be sure that visitors to the site have an opportunity to

review the company's career opportunities. Our research has shown that, when available, "jobs" is among the most accessed parts of any corporate site. But don't fret, even if your business isn't a household name, there's still plenty to be said for advertising job opportunities to online visitors: Just think about all the times you've checked out your competitors' Web sites.

Is reducing the cost of advertising jobs one of your primary goals? Classified ads are notoriously costly and sometimes ineffective. Corporate Web sites, on the other hand, can be updated easily with few outside costs. In fact, respondents to the 1997 Internet recruitment survey, like those who participated in an earlier version in 1996, rated the cost-effectiveness of Web recruiting very highly: 80 percent reported it's the most cost-effective recruitment method. Add to this the fact that your marketing department is probably spending time and money promoting the company's Web address, and you've got an unbeatable deal.

Tip Two: Figure out what you want to communicate and how you want to do it. At a minimum, visitors should be able to review your postings and apply online, if interested. If you already have an existing site, review options for getting candidates to **job postings** quickly and easily. You may find it obvious to look behind the "corporate" or "human resources" button, but don't count on candidates being that savvy. Remember, only the dedicated **job seeker** will take the time to hunt for **job listings**. An **"employment"** button in a prominent location on your homepage is a great way to convert curious visitors into applicants.

Next, consider how you'll provide potential recruits with some form of electronic application process. It's relatively easy to create an online resume builder; and for those with proprietary resume-management software, you may be able to upgrade your system to allow downloading from the Web. Alternatively, you can outsource the job to a third-party resume manager like job-fair specialist The Lendman Group based in Virginia Beach, Virginia. Through Lendman's online resume system (www.lendman.com), recruiters have access to a password-protected database and can avoid maintaining an onsite database.

Another alternative is the innovative new technology pioneered by start-up Network Recruiting (www.engdir.com) in San Rafael, California. Network Recruiting's Employment Packet Language (EPL) software automatically **matches** applicants with job openings. The EPL software immediately informs applicants of their suitability for a position and sends an e-mail to the hiring authority.

You also need to think about how to deal with electronic dialogue. An online recruitment site is a two-way channel of communication open 24 hours a day, 365 days a year. The question is how long do you want candidates to wait for a response? It's true that this new communication channel, as one pundit noted, "offers incredible new opportunities to disappoint." If it's possible to apply for a position in seconds, candidates will expect a quick response. One thing you can try is giving candidates the option to e-mail comments directly to the relevant hiring manager in addition to applying online.

Tip Three: Think about the involvement of HR and the hiring managers. Many Web surfers expect fresh new content on a regular basis. The work involved with this aspect of Web recruiting is easy to underestimate. For any who've struggled with writing employment ads, it should be simple to imagine how challenging it will be to develop and maintain an accurate and up-to-date employment-opportunity database. And don't even think about posting job requisitions to the Web. At the best of times, a requisition is hard to decipher. Bottom Free: Keeping a Web site up-to-date is a big job. If you're not prepared to deal with it, sign on with a company that is.

Using a Web site is an entirely new way to run a recruiting department. Advanced Web sites can automate many of the routine tasks and even can deal with some pretty complex challenges as well. For example, Dallas-based

Texas Instruments Inc. (TI) has been using a candidate profiler for four years (www.ti.com/recruit/docs/fitcheck.htm). Here, visitors to TI's site have the opportunity to take a "FitCheck" before applying for a position. Participants answer a series of questions designed to gauge whether they would fit into TI's culture. But TI's real innovation is allowing candidates to review the results of their fit check before deciding to submit it to TI. Now, your dream of providing a steady stream of pre-screened, interested and qualified candidates to hiring managers is possible.

Tip Four: Decide how high-tech you want your site to be. Not everyone will be accessing your site via high-speed ISDN or T1 lines. Nontechnical visitors or people surfing from home could be using a range of browsers. Many of the most successful recruiting sites--like Maynard, Massachusetts-based Digital Equipment Corp.'s (www.digital.com/info/careers)--are very basic and eschew the latest multimedia enhancements like Java or Shockwave. Our advice is save the bells and whistles and aim your site at the rank and file. But don't carry this philosophy too far: All of us on the Web are knee-deep in sites that never should've seen the light of day. If you have any doubts about the quality of your intended site, benchmark it against competitors' at the start of your project.

Tip Five: Content is king. If your Web site isn't going to contribute anything of value and substance, why bother? Don't fall into the trap of putting everything online just because you can. A company's annual report is usually the first thing to go up on a Web site, and we all know what a scintillating read that can be. If you're downsizing, expect a storm of disdain online if your new Web site fails to explain why you're busy posting so many jobs. Instead of just bragging about the benefits of working at your company, consider Redmond, Washington-based Microsoft Corp.'s approach (www.microsoft.com/jobs/pnwfaq.htm) and address the reasons people might not be applying (such as the interminable rain in Seattle).

photo omitted

Tip Six: Coordinate your efforts with your marketing and communications department. Never before has it been so important--and so difficult--to present a consistent, logical and coherent identity to possible workers. At the same time, be aware that an online recruitment center comes with its own set of needs and requirements which your coworkers in marketing may not understand. If they have no interest in writing recruitment ads, they may not be familiar enough with your objectives to take on your Web recruitment pages.

Tip Seven: Learn more from your online visitors. OK, you've established your site, and people are swinging by to see what you're offering. So, what kind of things would you like to know about your online visitors?

Employment applications are only part of the story. As the New York City consulting firm, McKinsey and Co. recently pointed out, prior to incorporating Web marketing, retail stores only could capture information on products they sold and the customers they sold them to. People who just came in to browse were unaccounted for. Electronic traffic is much more measurable. Everything surfs touch, click or view on a site can be measured. Did you know many Internet services can provide you with a list of the companies, schools and organizations that visited your Web site, along with details on all the pages they looked at? Why not go one step further like Bay Networks in Santa Clara, California (www.baynetworks.com/talentquest), and reward visitors for passing on the e-mail addresses of their friends. Or take a leaf out of Netstart's Career Builder's book (billed as "Your Comprehensive Career Achievement Site" at www.careerbuilder.com) and give visitors the opportunity to register their career preferences. This way you can e-mail appropriate jobs directly to them whenever positions at your company become available.

Tip Eight: Build relationships with job seekers. Use the information online candidates provide to add value to their experience. Think about how you might build a relationship with a candidate who decides to pass on your offer and joins a rival company. After all, today's newly graduated systems

engineer is tomorrow's senior systems engineer. Like Bay Networks, use your presence to gather e-mail addresses, and then use that list to create an ongoing dialogue.

Tip Nine: Make your site memorable and talk it up. The Web won't replace traditional advertising just yet, but it's already reshaping the way HR thinks about recruitment communications. According to the 1997 "Internet Recruitment Survey," companies that use their existing materials to promote their Web sites enjoy a much greater return than those that don't. Consider incorporating your new URL (Web address) into all recruiting materials including ads, coffee mugs, T-shirts and knickknacks.

And when it comes to your address, you don't need to stick with www.yourcompany.com. It only costs a \$100 or so to register a unique URL. Why not adopt a more memorable URL like one drawn from your tag line? That's what semiconductor leader LSI Logic, based in Milpitas, California, did with www.go-deep.com, for example. And for heaven's sake don't let anyone push you into a hard-to-remember string such as www.gsc.gte.com, the URL for GTE Government Services.

Tip Ten: Listen and learn from feedback. As any good marketer will confirm, Nature gave us two ears and one mouth for a reason. Forget this and you'll miss out on the true promise of cyberspace. Listen to what people have to say about your site and continually reevaluate your presence. Only then will you be able to stay on the forefront of this fast-moving wave.

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ABSTRACT: Recent personnel selection research has focused on models and criteria of performance, prediction of job performance based on personality measures and the fit between persons and organizations. The first two themes have converged with the discovery of interpretable linkages between predictors and performance criterion constructs. Other issues include validity and utility, additional issues related to statistical methods and measurement, equal opportunity in employment and other legal issues, and selection of personnel for work groups.

TEXT:

KEYWORDS: performance, validity, industrial/organizational psychology
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INTRODUCTION

Our critical review covers roughly the period of mid-1993 through early 1996. Computerized and manual literature searches, as well as invitations to more than 100 active researchers in the field to submit relevant materials, have resulted in a wide range of published and unpublished literature to review. The chapter is necessarily selective, emphasizing what we believe are the most important and interesting developments in the area of personnel selection.

Three major themes are especially critical for selection research and practice. First, increased attention is being focused on criteria and models of performance. This attention is very important because enhanced knowledge about criterion constructs will lead to better understanding of predictor-criterion linkages, and accordingly, to advances in the science of personnel selection.

The second theme involves the burgeoning interest in personality measures as predictors of job performance. It is becoming increasingly apparent that job performance is a function of both ability and motivational or dispositional factors, and that the latter elements of performance have links to personality. In our view, these two themes merge when it is recognized that development of performance models that differentiate criterion constructs reveal highly interpretable relationships between ability, personality, job knowledge, technical proficiency, and work performance.

The third theme relates to increased activity in person-organization (P-O) fit research, in part, we believe, as a reaction to emerging organizational realities including: 1. Organizations increasingly employ task-force teams whose members rotate from activity to activity rather than staying in one job. 2. In a related manner, as globalization and downsizing of many organizations continue apace, they are compelled to require more of employees, including "continuous improvement" in acquisition of new skills

and flexibility in work focus as the external business environment changes. These realities argue for greater reliance on selecting people according to their general fit to the organization rather than for a particular job. In addition to expanding on these themes, we cover recent literature on performance measures, abilities, personality, interviews, biodata, computerized testing, selection for teams, applicant reactions, validity, psychometrics, equal employment opportunity (EEO) issues, and P-O fit.

PERFORMANCE AND CRITERIA

Job analysis continues to be an important first step in selection research and practice. A recent major development in this area is a Department of Labor initiative to analyze virtually all jobs in the US economy in order to build a database of occupational information (O*Net). This database may be used by organizations and individuals to help match people with jobs (Peterson et al 1995). O*Net has as its basis a content model of occupational characteristics and person requirements. This content model consists of hierarchically organized taxonomies (e.g. skills, generalized work activities) so that users can enter the database at different levels of specificity according to their needs. Several occupations have been mapped using the content model, and the ultimate goal is to get close to complete coverage for the US economy. The person-job fit feature of the O*Net will enable comparisons between content-model person attributes and targeted occupational requirements. There is also an organizational-characteristics component in the content model that may facilitate P-O matches. The hope is that O*Net will help unemployed workers and students entering the workforce to find more appropriate jobs and careers, and employers to identify more highly qualified employees. These matches should be realized more systematically and with more precision than has been possible heretofore. An additional hope is that this initiative will encourage research that further advances the effectiveness of person-job matching, person-organization fit, and the science of personnel selection.

In a Fortune article, Bridges (1994) wrote about the "end of the job," how increasingly work will not be packaged in familiar envelopes we call jobs. Organizations that used to have a structure of jobs now have "fields of work." As mentioned above, people are increasingly on project teams that exist only as long as the project lasts, at which time they move to another project (Bridges 1994). Selection in such a context is still necessary. The task is to match knowledges, skills, abilities, and other personal characteristics (KSAOs) to requirements of the work. Lawler's (1994) essay on competency-based organizations is instructive on this topic. He believes that selection in this type of organization will require identifying persons who fit the "learning environment" and are likely to be capable of developing the skills necessary to do the organization's work. In a related manner, Sparrow (1994) discussed the effect on selection practices of flatter organizations, with a task force, team approach to getting work done. Selecting for adaptability, interactional skills, a willingness to learn, and a repertoire of multiple skills predicted to be important to future organizational functioning will be increasingly important. More research on this topic appears in the section on "Person-Organization Fit."

As mentioned, job performance models are beginning to foster more scientific understanding of criteria. These models have at least two different forms. One type attempts to explicate the central latent variables that can best characterize all performance requirements in work. A second type examines relations between elements of performance (e.g. job knowledge and proficiency) toward learning more about the criterion space. Regarding the first type, Campbell et al (1993) posited eight latent criterion factors that summarize the performance requirements for all jobs. Several of these latent constructs emerged consistently in the Project A research (a large-scale selection and classification study conducted in the US Army (Campbell 1990)), across the many jobs studied in that program. Accordingly, there is some impressive empirical support for at least part of this performance taxonomy. The importance of this research direction is considerable. The criterion domain should be carefully mapped, just as various predictor areas have already been (e.g. abilities and personality). This specification of criterion content should importantly shape the way selection research gets done (Campbell et al 1993). Consistent with one

theme of this review, a criterion taxonomy will help to organize accumulating research findings by addressing questions about links between predictors and individual criteria rather than predictors and overall performance. Research by McCloy et al (1994) supports this view of predictor-criterion relations. These authors divided the criterion space into declarative knowledge, procedural knowledge and skill, and motivational components. Using data from eight jobs in Project A, they demonstrated that declarative knowledge is predicted primarily by cognitive ability, whereas the motivational element of performance (indexed by ratings) is linked to personality.

The second type of job performance model first emerged in Hunter (1983), in which path analysis results suggested that ability has primarily a direct effect on individuals' acquisition of job knowledge which, in turn, influences job holders' technical proficiency. Supervisory performance ratings were a function of both ratee job knowledge and technical proficiency. Subsequent research focused more on antecedents of performance ratings. A recent paper (Borman et al 1995) concluded that ratee technical performance and dependability were equally influential on supervisory ratings. This finding confirms results from Motowidlo & Van Scotter (1994) that technical and contextual performance (Borman & Motowidlo 1993)--the latter similar to prosocial organizational behavior--are roughly equally weighted by supervisors in making overall performance ratings. Other studies have reported similar results (e.g. Dunn et al 1995, Ferris et al 1994, Werner 1994), although McIntyre & James (1995) demonstrated that dimension weights differ for different ratees. We believe this work on job performance models is important in that, like Campbell's effort, it differentiates criterion constructs, and attempts to increase understanding of each, as well as of relationships among them. To underscore this point, Campbell et al (1996) urged that in structural models such as Hunter's (1983) and Borman et al's (1995), we move beyond studying overall performance ratings as the dependent, endogenous variable to examining individual dimensions of performance from the substantive models referred to previously (e.g. Campbell et al 1993). These thrusts to differentiate criterion constructs conceptually and, most importantly, in measuring them are prerequisites toward systematically studying links between individual predictor and criterion variables.

In fact, such links have been explored. Project A validation results show that ability best predicts performance on the technical proficiency criteria, and personality, especially dependability, best predicts performance on the contextual dimension, personal discipline. Motowidlo & Van Scotter (1994) and Van Scotter & Motowidlo (1996) found that personality predictors generally correlated higher with contextual performance than with task performance. DuBois et al (1993) also demonstrated that when the criterion space is divided up and separate elements are correlated with predictor scores, a coherent pattern of relationships emerges. In a sample of supermarket checkers, these authors found that general cognitive ability correlated higher with a maximal performance measure than with typical performance. Organ & Ryan (1995) reported substantial correlations between conscientiousness and organizational citizenship behavior. If more research can be accomplished to precisely identify predictor links with individual dimensions of job behavior, the science of personnel selection will be enhanced enormously.

In the last Annual Review chapter on selection, Landy et al (1994) predicted that organizational citizenship, prosocial organizational behavior, and contextual performance would get increased attention as criterion issues. This has occurred. Beyond the studies discussed above, a special issue of the Employee Responsibilities and Rights Journal has several articles about citizenship behavior and its relationship with, especially, procedural justice and organizational commitment. Finally, and more broadly, we see an important contribution to thinking about expanded criterion domains in Ilgen (1994). Ilgen and colleagues construe jobs in the context of roles that evolve for job holders. These authors' job-role differentiation framework recognizes the importance of social factors in defining "the job." These social factors are likely to introduce contextual-like performance elements into the criterion domain.

We now consider laboratory and field studies that address issues in rater training and the performance judgment process. Regarding rater

training, Woehr & Huffcut (1994) conducted a meta-analysis and found that frame-of-reference (FOR) training is overall the most effective rater training treatment. Sulsky & Day (1994) found that FOR training promoted accuracy in performance ratings. However, their results for ratings occurring two days after training suggested that subjects did not recall specific behaviors but instead previously formed impressions of ratees. This in turn suggests that FOR training might not be so useful in helping raters give behavioral feedback to ratees. Lab studies are moving beyond whether FOR and other training treatments "work" to evaluate the information processing mechanisms important for success or failure of rater training programs.

Regarding halo in ratings (i.e. larger than warranted correlations between dimensions), Lance et al (1994) conducted an innovative study comparing causal models representing three different conceptualizations of halo in ratings: 1. General Impression: Overall impression influences ratings on individual dimensions. 2. Salient Dimension: A rating on a single salient dimension influences other dimensional ratings. 3. Inadequate Discrimination: A failure to discriminate between relatively independent dimensions. The first model explained the rating data best, even in situations where the other two types of halo were explicitly encouraged.

Hartel (1993) returned to rating format issues by studying an interaction between rater characteristics and format type. In a lab study, she found that field-independent raters were more accurate than field-dependent raters when a holistic format was employed. Harris (1994) presented a model of supervisory rater motivation in the performance appraisal process. His view is that motivation in this process is a function of both situational (e.g. accountability) and personal (e.g. self-efficacy) factors. Elsewhere, Sanchez & De La Torre (1996) found that observation and evaluation accuracy were related only immediately after viewing performance and only for the components of accuracy involving identification of ratee strengths and weaknesses (i.e. stereotype and differential accuracy). In addition, Ganzach (1995) found evidence of nonlinearity in performance ratings in three field data sets. In particular, the ratings were conjunctive, with negative information influencing the overall performance judgments more than positive information. In a meta-analysis, Viswesvaran et al (1996) estimated the 1-rater interrater reliability of supervisor and peer ratings on 10 dimensions of performance, each at about the same level of specificity as the Campbell et al (1993) taxonomy discussed above. Highlights of the results are: 1. Overall performance interrater reliabilities for supervisors average .52; .42 for peer ratings. 2. Interrater reliabilities for individual dimensions are at about the same level. The latter result is at odds with findings from personality psychology (e.g. Funder 1995) that hypothesize and demonstrate empirically that some traits are more observable and more salient than others, which results in higher interobserver agreement in ratings.

Computerized performance monitoring (CPM) is becoming more common in the communications, banking, insurance, and other industries (e.g. Hedge & Borman 1995). In general, I/O psychologists have used little of their expertise in performance measurement and appraisal to help guide the development, implementation, and evaluation of CPM systems. Exceptions are Kulik & Ambrose (1993), who found in a lab study that raters paid more attention to secretarial performance they actually viewed than CPM information on the same secretaries, and Aiello & Kolb (1995), who found that for high-skill data-entry workers CPM improved performance and that for low-skill workers CPM led to lower performance. In other developments, Pritchard's Productivity Measurement System (ProMES) has now been used in many settings. An edited book (Pritchard 1995) described successful applications of this method in several manufacturing, service, and other settings. Finally, Quinones et al (1995) showed that work experience is not a unitary concept by demonstrating with meta-analysis that although the overall correlation of experience and job performance is .27, this relationship is significantly higher when experience is defined at the task (rather than the job or organizational) level and as amount (e.g. number of times performed).

PREDICTORS: CONTENT

Abilities and Achievement

COGNITIVE ABILITIES A recently published book, *The Bell Curve* (Herrnstein & Murray 1994), brought a great deal of public attention and debate to the issues surrounding the meaning of intelligence test scores and the nature of general intelligence. The central premise of this book is that individual differences in intelligence have implications for life outcomes and for society as a whole. In an attempt to clarify the issues involved in this debate, the American Psychological Association (APA) assembled a task force to develop an authoritative report on the current status of the relevant scientific findings. The product of this task force was an article in the *American Psychologist* (Neisser et al 1996) reflecting a consensus among many of the leading researchers in the area concerning the nature of general intelligence, subgroup differences, the heritability of intelligence, environmental effects on intelligence, and a variety of related topics. This article is important because discussion generated by *The Bell Curve* seems to "have gone well beyond the scientific findings, making explicit recommendations on various aspects of public policy" (Neisser et al 1996, p. 78).

In the personnel selection arena, the debate concerning the ubiquitousness of the role of general mental ability or *g* in the prediction of training and job performance continues to simmer. Several recent studies have again demonstrated that psychometric *g*, which is generally operationalized as the common variance in a battery of cognitive ability tests (e.g. the first principal component), accounts for the majority of the predictive power in the test battery, and that the remaining variance (often referred to in this research as "specific abilities") accounts for little or no additional variance in the criterion (e.g. Larson & Wolfe 1995, Ree et al 1994b). This line of research also suggests that specific ability components account for somewhat more variance when the criterion is job performance than when it is training performance (e.g. Olea & Ree 1994, Ree et al 1994b), which highlights the importance of the selection of criteria in validation research. Defining *g* statistically using a principal components model is not without its critics. Specific abilities will, by definition, be correlated with the general factor. Thus, it could be argued that it is just as valid to enter specific abilities first and then say that *g* doesn't contribute beyond the prediction found with specific abilities alone (e.g. Murphy 1996b). In fact, Muchinsky (1993) found this to be the case for a sample of manufacturing jobs, where mechanical ability was the single best predictor of performance, and an intelligence test had no incremental validity beyond the mechanical test alone.

While there is a growing consensus concerning the predictive efficiency of *g*, there is less agreement about what this means, especially as it relates to personnel selection practices and research. Some have concluded that "refinements in the measurement of abilities and aptitudes are unlikely to contribute nontrivial increments to validity beyond that which is produced by good measures of general mental ability" (Schmidt 1994, p. 348). Others suggest a variety of scientific and pragmatic reasons why the measurement of specific abilities may still be important and potentially useful. On the scientific side, possibly the most important note of caution is the fact that our understanding of the basic cognitive processes that underlie intelligent behavior and the reasons some people are more able than others is still quite limited (e.g. Murphy 1996b). In addition, an understanding of the processes by which abilities affect performance and the latent structure of the ability-performance relationships is needed to advance the science of personnel selection (e.g. Bobko 1994).

Specific abilities are likely to be more useful (in addition to or in place of *g*) when our goal is understanding, rather than just predictive efficiency (e.g. Alderton & Larson 1994, Murphy 1996b). For example, several recent studies have demonstrated meaningful patterns of relationships between specific abilities and criteria. Carretta & Ree (1995) found that different subtests of the Air Force Officer Qualifying Test (AFOQT) were most valid during different phases of pilot training, and for different training criterion measures. Silva & White (1993) found that a language aptitude battery had significant incremental validity beyond general mental ability for predicting success in a language training course. Dror et al (1993) examined differences in spatial ability between

pilots and nonpilots and found that pilots were superior in very specific aspects of spatial ability (e.g. mental rotation) rather than in general spatial ability. In addition to the potential for promoting understanding, improved measures of specific abilities and expanded test batteries have also been found to improve the measurement of g (e.g. Larson & Wolfe 1995) which, in turn, may improve validities.

Cognitive psychologists have been studying the nature of intelligence for years, and although their models are just beginning to see application in personnel-related contexts, this sort of theory-based approach clearly has potential for, again, improving our understanding of cognitive ability and of ability-performance relationships. For example, the Air Force is conducting a programmatic research effort to develop and evaluate an ability test battery based on a "consensus information processing model" (Kyllonen 1994). Information is not yet available concerning prediction of training or job performance with these tests, but preliminary results are promising. The internal structure of the test battery is consistent with the information processing model. It has been shown to predict laboratory learning tasks somewhat better than more traditional ability measures, and at least one of these elementary cognitive tasks (working memory) is strongly related to general mental ability. Cognitive psychologists have also identified what appear to be "new" abilities (e.g. time sharing, dynamic spatial ability) that could eventually find selection applications as well (e.g. Jackson et al 1993). One potential concern is that practice and coaching may be more of a problem for the relatively novel tasks included on many of these tests when they are used for selection purposes. Regarding computerized testing more generally, test design issues are discussed by McHenry & Schmitt (1994). In addition, Bennett (1994) provided a review of "constructed" response (i.e. free response) tests that are administered and scored by computer.

Conclusions about the predictive efficiency of specific abilities are very different when the goal is classification rather than simply selection. Zeidner & Johnson (1994) and Scholarios et al (1994) have shown that specific abilities substantially improve classification efficiency, beyond the use of general cognitive ability alone. Using somewhat different procedures, other researchers have confirmed and extended these findings (Abrahams et al 1994, Rosse et al 1995). The amount of gain possible from classification versus selection is negatively related to the intercorrelations among the specific ability tests or composites of tests and positively related to the number of jobs or job families into which applicants are to be classified. However, substantial gains have been found even with predictors (e.g. composites) that are quite highly correlated. These findings are also relevant for vocational/occupational counselors and others concerned with placement (e.g. in the new O*Net), because their decisions are similar to classification decisions in this context.

ACHIEVEMENT We know very little about the nature of specific abilities when they are defined as the variance remaining once a general factor is extracted statistically. It is interesting to note that what little information is available suggests that these "specific ability" components tend to be most strongly related to cognitive ability tests that have a large knowledge component (e.g. aviation information (Olea & Ree 1994)). This is consistent with previous research showing that job knowledge tests tend to be slightly more valid than ability tests (Hunter & Hunter 1984), and also with research demonstrating that job knowledge appears to mediate the relationship between abilities and job performance (e.g. Borman et al 1993). In a recent meta-analysis, Dye et al (1993) demonstrated the generality of job knowledge tests as predictors of job performance. In addition, they found that the validity of job knowledge tests was moderated by job complexity and by job-test similarity, with validities significantly higher for studies involving high-complexity jobs and those with high job-test similarity. The average corrected validity for job knowledge tests with high job-test similarity was .62 for job performance and .76 for training performance, and this is somewhat higher than the average corrected validity typically found for cognitive ability tests (e.g. .53 (Hunter & Hunter 1984)). Cognitive task analysis--employing protocol analysis to create an elaborated definition of job expertise--may be especially useful for developing job knowledge tests (e.g. DuBois et al 1995).

It might be helpful to discuss research in this area in the context of the distinction between aptitudes and achievement. Briefly, aptitude tests typically draw their items from a wide range of human experience or involve content that is not learned (e.g. reaction time). Achievement tests, however, consist of material that is necessarily more circumscribed. Scores can increase rapidly because of exposure to information from the relevant content area. It is likely that tests of aptitudes and achievement actually fall on a continuum, and these definitions represent the extremes of this continuum. Job knowledge tests are clearly measures of achievement, whereas most cognitive ability tests are near the aptitude extreme of the continuum. Thus, when the content of achievement tests is closely related to the criteria they are used to predict, these tests show greater validity than aptitude measures.

In this context, these results are consistent with research on "tacit knowledge" (i.e. action-oriented knowledge acquired without direct help from others). Tacit-knowledge measures ask respondents to place themselves in a series of job-related situations and then to report what they would or should do. Sternberg and his colleagues have repeatedly found significant validities and some incremental value (over general intelligence) for measures of tacit knowledge in predicting job performance or success (Sternberg et al 1995). Tacit knowledge has been shown to be at least somewhat trainable and to differ according to relevant expertise, which argues for it being placed closer to the achievement end of the aptitude-achievement continuum than more traditional ability tests. Thus, tacit knowledge measures could be viewed as achievement tests with high job-test similarity (and thus high validity). And yet, these measures target knowledge that can arguably be acquired without formal training or job experience (e.g. knowledge related to interpersonal effectiveness). Sternberg characterizes the measured construct as practical intelligence or "street smarts," which is more in concert with the aptitude end of this continuum. It is currently unclear what underlying construct(s) is (are) being measured by these tests. We note that tacit-knowledge measures are very similar to situational judgment tests, described in more detail in the section on "Assessment Centers".

In this same vein, behavioral consistency measures (Wernimont & Campbell 1968) might be viewed as the extreme case of achievement measures with criterion-related content (though there is arguably a motivational component in these measures as well). Hanisch & Hulin (1994) found that a measure of behavioral consistency (operationalized as training performance) significantly increased validity beyond that provided by general ability measures alone for predicting performance on an air traffic control task; however, including ability did not increase validity beyond training performance alone. Using data from the Army's Project A, Campbell et al (1994) demonstrated that both measured abilities and training performance added unique variance to the prediction of future performance. It is not clear why abilities provided incremental validity in the latter research and not in the former, but it is apparent that training performance can increase the validity of ability measures alone in predicting later job performance.

PHYSICAL ABILITIES Although physical ability tests are reported to be used more widely for selection now than ever before (Hogan & Quigley 1994), not much new information has been published in this area since Landy et al's review. In one recent study, Blakley et al (1994) provided additional evidence that isometric strength tests are valid predictors across a variety of different physically demanding jobs, and also that the prediction of work simulation performance was better than the prediction of supervisory ratings of physical ability. Blakley et al also found, in a large applicant sample, that females scored substantially lower than males on these isometric strength tests. In light of these findings, there is a recent and growing interest in reducing adverse impact through pretest preparation. Hogan & Quigley (1994) demonstrated that participation in a physical training program can improve females' upper body strength and muscular endurance, and that participation in a pretest physical training program was significantly related to the likelihood of passing a firefighter physical ability test.

Personality

Research on personality predictors of job performance continues apace.

Evidence mounts that personality predicts job performance (e.g. Barrick & Mount 1991, Hogan et al 1996). One possible reason for the generally positive validity findings can be derived from the results discussed above showing that personality predicts contextual performance (e.g. Motowidlo & Van Scotter 1994). Many of the criteria used in the Barrick & Mount (1991) meta-analysis, for example, were overall job performance ratings, and we have learned that these ratings weight both technical and contextual performance (e.g. Borman et al 1995). Accordingly, the personality measures may be picking up on the contextual component of the criteria. This implies that where the contextual elements of performance can be measured separately, these validities might be higher. A related issue has emerged about whether we learn more about personality-performance links if we use relatively broad traits or narrow traits and if we use general or specific performance constructs. Hough & Schneider (1996) and Schneider & Hough (1995) argued that the Big 5 personality taxonomy (five summary dimensions often identified in factor analyses of personality ratings or self-reports) may be at too coarse a level for use in personnel selection. A nine-factor system was proposed. As evidence that a more fine-grained representation of personality may be useful in prediction, they showed that achievement, which is a more narrow construct than are the Big 5 factors, correlated more highly than did conscientiousness (previously found to correlate the highest of the Big 5 with job performance) with the criteria of overall job performance, job proficiency, training success, educational success, sales effectiveness, and effort. What Hough & Schneider (1996) called compound traits--constructs that don't line up precisely with the Big 5 but which have clear alignment to criterion constructs--are also likely to be useful for selection.

However, Ones & Viswesvaran (1996) argued that broader, rather than narrower, fine-grained personality measures are preferable for use in personnel selection. This is because global measures are likely to be more reliable and job performance criteria are usually complex. They also noted that integrity tests (often a composite of several Big 5 constructs) appear to have higher validity on average than any of the Big 5 traits by themselves (Ones et al 1993). Schneider et al (1996) disputed the Ones & Viswesvaran (1996) conclusion regarding "broader is better." They contended that when strong hypotheses about specific trait-specific criterion links can be made, narrower trait constructs will show better prediction. Hogan & Roberts (1996) provided several examples of narrower personality trait measures predicting specific criteria better than broader such measures. Also, Blake et al (1993) found that some specific scales of the California Psychological Inventory (CPI) predicted overall performance of military academy students (a broad criterion) as well as or better than the more global structural scales, and Powell et al (1995) found that the Big 5 predicted global measures of performance and that more specific facets of these measures predicted more specific dimensions of customer service. Finally, Crant (1995) demonstrated that a relatively specific personality scale predicted real estate sales performance incrementally over measures of the Big 5. As far back as Dunnette (1963), we have believed that the science of personnel selection is best served by studying links between specific predictor and criterion constructs, so this issue is a very important one. The updated arguments by Campbell (Campbell et al 1993, 1996) are compelling to us. If we are interested in learning more about predictor-performance relations, we need to examine linkages between predictor constructs and different facets of job performance.

There has been considerable recent activity around integrity or honesty testing for selection. PR Sackett & JE Wanek (unpublished manuscript) provide a comprehensive review of issues regarding integrity testing. Of special interest are links between both overt (i.e. direct questions about honesty, integrity, etc) and personality-based integrity tests and the Big 5 personality factors. In an especially useful table, these authors summarize data from Barrick & Mount (1993) and Ones et al (1993) that reveal correlations corrected for attenuation between overt and personality-based integrity tests, the Big 5, and job performance. Meta-analysis results show that on average, overt integrity tests correlate .45 with one another; personality-based tests intercorrelate more highly ($r = .70$ on average). The mean correlation between the two types of integrity tests is .39 (Ones et al 1993). Correlations between overt and

personality-based tests and the conscientiousness Big 5 factor are substantial, but so are correlations with the agreeableness and emotional stability factors. Both types of integrity tests correlate .41 with job performance (Ones et al 1993). Conscientiousness and integrity measures, taken together, are likely to produce higher correlations with performance than either one on its own (PR Sackett & JE Wanek, unpublished manuscript). Finally, Murphy (1993) contributed a thorough treatment of honesty in the workplace, including a chapter on integrity testing for personnel selection. In addition, Collins & Schmidt (1993) administered personality, personality-based integrity, and biodata scales to prison inmates incarcerated for white-collar crimes and individuals employed in upper-level positions of authority. Cross-validated discriminant function analysis showed large differences between these two groups, especially on the integrity test, and suggested that "social conscientiousness" best differentiated these groups. Importantly, the criteria used to examine the validity of integrity tests has broadened from theft to a range of counterproductive behaviors including disciplinary actions, accidents, unexcused absences, terminations, drug or alcohol abuse, admissions of wrongdoing, and violence.

The issue of faking or impression management in responding to personality items is of course important in the personnel selection context. Several recent papers confirm that, while slanting of responses occurs in selection settings, validity does not seem to suffer. Barrick & Mount (1996) demonstrated that although self-deception and impression management response distortion of personality items occurred in their sample, validity of the responses was not adversely affected. Christiansen et al (1994) used the 16PF fake good and fake bad scales to correct the scores of assessment center candidates and found that criterion-related validity was unaffected.

Although response distortion does not appear to have a major impact on personality inventory validity in a selection context (e.g. Barrick & Mount 1996), it is still of some concern because these measures are definitely fakeable. One approach to detecting faking when using computerized administration of personality tests is to measure response latencies. Holden & Hibbs (1995) have refined this strategy; the trick is to first correct latencies for both person effects (e.g. slow vs fast readers) and item effects (e.g. longer vs shorter to read). Holden & Hibbs find that these adjusted latency scores can correctly classify about 82% of the test-takers instructed to respond honestly and those told to try to maximize their chances of getting the job. This method deserves more attention. Relatedly, Siem (1996) demonstrated incremental validity in predicting Air Force pilot performance for some MMPI scales when response latencies were incorporated in the scoring system.

Worthwhile for I/O psychologists to be aware of in the personality literature are possible moderators of personality-performance correlations. These include specific personal moderators (e.g. the centrality of a given trait may vary across individuals), general personal moderators (e.g. low self-monitors are more predictable), situational moderators (e.g. high-autonomy jobs have lower situational strength and thus personality predicts performance better in them), and aptitude by treatment interactions (e.g. the validity of achievement via conformance and independence may be different in high- and low-structure workplaces). Schneider & Hough (1995) provide a nice discussion of these issues for I/O psychologists.

There were several other interesting papers on the topic of personality. Although conscientiousness has been viewed as a consistent predictor of job performance (Barrick & Mount 1991), Hogan & Hogan (1993) demonstrated that this relationship may vary across occupational type, with artistic jobs showing a negative correlation, for example. Schmit et al (1995), in a study with college students found that providing an "at work" context for personality test items improved the predictive validity of their conscientiousness scale against a criterion of GPA and did not alter the factor structure of the inventory scores. McDaniel & Frei (1994) conducted a meta-analysis of customer service predictor validities and found a corrected mean validity of .49 based on 49 correlations and an N of 6441. Virtually every study of personality in a selection context has used self-reports to measure personality constructs. However, Mount et al (1994)

found that observer ratings (i.e. supervisor, peer, and customer) of Big 5 personality constructs added to the prediction of job performance beyond self-reports alone. Finally, Hogan & Blake (1996) argued that vocational interests are meaningfully related to personality and urged that vocational psychology's taxonomic schemes be considered in studying links between individual differences in personality and work outcomes, including performance (but see Schmidt 1994).

PREDICTORS: PROCESS

Assessment Centers

The assessment center (AC) continues to be popular in US organizations and elsewhere. For example, Payne et al (1992) report a threefold increase (1985-1990) in the use of ACs for managerial selection in the United Kingdom. However, published literature on ACs has dropped off. We believe this is because: (a) the predictive validity of ACs is now largely assumed, and (b) there is less hope and enthusiasm for finding a way to establish their internal construct validity. Regarding the latter point, the consistent finding has been that exercise rather than trait factors emerge from factor analyses of AC ratings. This is important if we are using ACs for developmental purposes. Feedback to participants on dimensions that are not rated reliably across exercises cannot be easily justified.

At any rate, there have been a few interesting studies on ACs. Henderson et al (1995) developed an AC in the United Kingdom focused on tapping competencies likely to be important in future business settings. Ryan et al (1995) had college students view performance in an AC exercise either in vivo, videotaped, or videotaped with an opportunity to pause and rewind. Observation accuracy was somewhat better in the latter condition, but no significant differences were found for evaluation accuracy.

An important trend in organizations using or interested in using assessment for selection or promotion is to streamline those assessments. Employing fewer exercises or assessors, reducing exercise length, reinventing the consensus meeting process, etc, are given increasingly serious consideration as companies struggle to reduce costs in human resources practices and elsewhere. "Low fidelity" assessment or situational judgment tests (SJTs) can be viewed as a rather extreme attempt to streamline ACs. As mentioned above, SJTs generally present difficult but realistic situations job incumbents might face and ask what the testee would or should do in each situation. Often SJTs have a multiple-choice format, and testee responses are scored against expert judgments of each response option's level of effectiveness (e.g. Motowidlo & Tippins 1993).

These tests are not new (e.g. File 1945), but they have recently become more popular. Further, SJTs have been successful in predicting job performance (e.g. Motowidlo & Tippins 1993) and attrition (e.g. Dalessio 1994). An obvious inherent limitation of SJTs is that they probably do not measure can-do or will-do performance but should-do performance and are thus more similar to achievement or job knowledge tests (see the section on "Abilities and Achievement"). Nonetheless, Kerr (1995) and Sternberg et al (1995) reported correlations of about .30 and .60, respectively, between business tacit knowledge test scores and AC ratings. In addition, video-based SJTs (e.g. Drasgow, unpublished working paper 1993) may reduce the fidelity deficit somewhat. Our view is that more research is needed on what SJTs are actually measuring, similar to what has been called for regarding ACs (e.g. Klimoski & Brickner 1987).

Interviews

Much continues to be written about the interview and its validity. Most notable are reviews that supplement previous meta-analytic work, and discussions surrounding the interaction between structure in the interview and the interview's purpose. We group relevant research into five major thematic areas.

First, additional quantitative and qualitative reviews of interview reliability and validity have been conducted. Huffcutt & Arthur (1994) revisited the Hunter & Hunter (1984) meta-analysis to assess interview validity compared with that of ability tests. By recategorizing interview studies according to level of structure, the authors found that interview validities increased as structure increased, with the top two levels of structure comparable to validities found by Hunter & Hunter for ability tests. A meta-analysis of interview reliabilities (Conway et al 1995) showed that interrater reliability levels are higher when interviews

incorporate multiple ratings, interviewer training, and standardization of questions and response evaluation. Such reviews continue to supply optimism for, and guidance concerning, use of the interview as a selection tool.

A second area of research encompasses what Dipboye & Gaugler (1993) referred to as the cognitive and behavioral processes in the interview. Most of these studies isolate a particular variable or two in the interview process and attempt to determine the impact on the outcome of the interview. For example, Williams et al (1993) found that preinterview impressions had their greatest effect when applicants' interview performance was average; high performers' ratings were slightly affected by negative preimpressions, while low performers were rated low regardless of the preimpressions. Stevens & Kristof (1995) found that applicants' impression management tactics significantly predicted interviewers' evaluations, and applicants seemed to use more self-promotion tactics than ingratiation tactics. Dalessio & Silverhart (1994) suggested that interviewers may not give much weight to candidate performance in the interview if they are aware of high biographical test score data, but they will place more credence on interview performance if biodata information is less supportive of a decision to hire. In an intriguing study, Motowidlo & Burnett (1995) demonstrated that raters who watched videotaped interviews with no sound provided reasonably valid ratings, that interviewers do rely on visual cues even when aural cues are present, and that aural and visual cues are somewhat redundant. Pulakos et al (1996) examined individual differences in interviewer ratings and found no support for the hypothesis that systematic interviewer errors will attenuate interview validity when data are aggregated across interviewers. In addition, consensus ratings were shown to have slightly higher validities than averaged ratings. Howard & Ferris (1996) examined the social and situational context of employment interview decisions using structural equation modeling. They found that high levels of appropriate nonverbal behavior (i.e. smiling, nodding, eye contact) by applicants increased interviewers' ratings of their competence. In addition, more highly trained interviewers perceived self-promoting applicants as less competent than did interviewers with less training. More expansive, model-based studies like this one will help to advance current knowledge about the interview process.

A third major area involves comparison of interview techniques, primarily future-oriented (e.g. situational) and past-oriented (e.g. behavior description) interviews. Campion et al (1994) reported higher validities for past-oriented (.51) than future-oriented interviews (.39). In addition, when ratings from both types of questions were regressed against job performance, past questions showed incremental validity over future questions, but not vice versa. Pulakos & Schmitt (1995), using professional government employees as subjects, compared situational versus past behavior questions in a structured interview and found that only the past behavior questions were valid in predicting supervisor ratings. Using a group of French- and English-speaking Canadian managers, Latham & Skarlicki (1996) demonstrated that both the situational and behavior description interviews were resistant to same-race bias (e.g. in-group favoritism, out-group discrimination), while the conventional interview was not. It seems well established now that structured interviews are more valid than their unstructured counterparts for predicting job performance. About the question of what kind of structured interview is more valid, the advantage presently goes to the behavior description procedure. We are likely to see more comparison studies in the future.

A fourth area involves a broad examination of constructs underlying the interview. Sue-Chan et al (1995) administered the Wonderlic Personnel Test, a tacit knowledge test, a measure of self-efficacy, and an interview to undergraduate nursing students. Neither the situational nor patterned interview correlated significantly with the cognitive or tacit knowledge tests but both did so with the self-efficacy measure. In addition, the situational interview showed incremental validity beyond the cognitive test, using grade-point average as the criterion. Campion et al (1994) investigated the notion that a structured interview has incremental validity over a battery of cognitive ability tests and found that the interview correlated .60 with the battery of tests, but showed incremental validity when regressed against job performance ratings. We echo Landy et al's (1994) endorsement of continued emphasis on examining the nomological

network around interview judgments.

The fifth and final area involves a debate, sometimes heated, about what the true purpose of the interview should be. Herriot (1993) proposed that the interview's focus should reflect a dynamic interpersonal process, rather than the prevalent psychometric perspective. Herriot characterizes the latter as academic, while the former is seen as more practitioner oriented, and therefore more useful to organizations. In related work, Adams et al (1994) emphasized the importance of the interview from something other than a "prediction-of-performance" view, stressing its usefulness for assessing applicant-organization fit. A similar theme was sounded earlier by Anderson (1992), who reviewed and categorized eight decades of interview research into objectivist-psychometric and subjectivist-social perception perspectives. Howard & Ferris (1996) stressed this theme when they suggested interviewer training that considers the context of the organization might help interviewers better gauge whether applicants will be successful in the organization. This notion of organizational fit was also discussed by Latham & Skarlicki (1995), who investigated the criterion-related validity of the situational and patterned interview using organizational citizenship behavior as the criterion. They found that the situational interview predicted citizenship behavior and concluded that extra-role behavior can indeed be predicted with an interview format.

Finally, in an excellent review of the interview literature, Dipboye (1994) cited reasons why structured procedures show greater validities than unstructured procedures. He also discussed why unstructured interviews continue to be used, including: 1. Recruitment (in addition to selection) is often a concern. 2. More interviewer autonomy and self-expression is possible. 3. Chances for a good fit between hires and the context of the job are improved. Dipboye (1994) argued that we need more dynamic models of employee selection in which the interview maintains structure in the assessment of applicants while fulfilling other functions such as evaluating fit to the organization. Such an approach suggests broadening the attributes that are assessed to include personality characteristics, personal values, and the like, attributes relatively neglected in the current structured interview approaches.

Biodata

In the two preceding Annual Reviews of personnel selection (Landy et al 1994, Schmidt et al 1992), the authors emphasized the importance of increased attention to theory and to the constructs being measured in biodata research, development, and application. Three documents published in the period covered by this review suggest movement in that direction. First, publication of the Biodata Handbook by Stokes et al (1994) provides coverage of job analysis, item development, scoring, validation, legal issues, theories, and applications. As Dunnette (1994) noted in his foreword, "publication of the Biodata Handbook marks a juncture, serving not only to outline current knowledge of the practical and scientific bases of biographical information, but also to provide a framework for extending our knowledge substantially in the years to come" (p. xi).

A second source for biodata information can be found in Trent & Laurence (1993), a monograph for the Department of Defense examining adaptability screening for the Armed Forces. The monograph provides a good overview of the social, political, and technical issues surrounding use of biodata in the military. In a third volume, edited by Rumsey et al (1994), Mael (1994) discussed approaches to biographical data, especially related to how they are viewed from a legal perspective. In the same volume, Schmidt (1994) provided insightful comments about biodata theory and practice. These three edited pieces portend an increasing emphasis on biodata in the years ahead. Elsewhere, Brown & Campion (1994) found that recruiters perceive both cognitive and noncognitive information in biodata, and each can be interpreted quite reliably. In addition, Mael & Ashforth (1995) suggested that biodata may capture dispositional elements associated with person-organization fit, internal cultural socialization, preference for group attachments, and achievement-oriented pursuits.

Applicant Reactions

Landy et al (1994) referred to the history of personnel selection as pre-Copernican in that the center of the universe with respect to selection has been the needs and goals of the user (i.e. the employer). This is

changing, with continued interest in applicant reactions to selection procedures, the "social side" of selection. First, why might applicant reactions to selection procedures be important to study? Smither et al (1993) and Rynes (1993) provided good responses to this question. Beyond what some would see as a moral imperative to become involved with applicants' concerns: 1. Organizational attractiveness to applicants is growing in importance because organizations increasingly see them as customers to be satisfied in the applicant-employer relationship. 2. There is increased potential for unpopular or controversial selection procedures to lead to lawsuits against the organization. 3. Negative applicant reactions may indirectly affect the validity of a selection procedure.

The most straightforward way to study this topic is to ask applicants essentially how they feel about each type of selection test or procedure. For example, Rynes & Connerley (1993) surveyed job seekers about their general reactions to 13 different selection procedures. Most popular were simulations and tests with business-related content. Least popular were personality, honesty, and drug testing. Kluger & Rothstein (1993) found that business student subjects were more comfortable with a biographical inventory than with an ability test in that they viewed themselves as having more control over their performance, thought it was fairer and less difficult, and believed the test better captured "who they were." Rosse et al (1994) found that, in general, relatively concrete and more obviously job-related predictors are seen as fairer in a selection setting. However, Tepper (1994) demonstrated the danger of using lab research to study attitudes toward selection procedures. Subjects in a lab setting rated favorably drug testing for safety-sensitive occupations, whereas individuals actually tested for drugs in these occupations had more negative attitudes.

Rynes (1993) provided an excellent overview of the early research on applicant reactions. She focused on how applicant attitudes toward organizations are influenced by selection practices and how those attitudes may affect applicant behaviors, job-choice decisions, and early expectations as a job incumbent. Her position is that this area of study will become more important as drug and integrity testing, background checks, and personality assessment become more popular. Rynes calls for more qualitative research (e.g. protocol analysis and other direct process-oriented methods) to better frame the process of responding to selection practices.

A path to get beyond individual studies of best- and least-liked selection procedures is to develop a framework related to social issues involved in the selection process. Two kinds of models have recently emerged. Schuler (1993) and Arvey & Sackett (1993) provided listings of possible determinants of fairness perceptions. Gilliland (1993) presented a model of reactions that depicts the situational and personal conditions that influence how procedural and distributive justice rules are judged to be satisfied (or violated). Conditions include job relatedness and consistency of the selection procedures, opportunity for two-way communication with company representatives and to be reconsidered if rejected, feedback about test performance, and the propriety/invasiveness of questions.

Macan et al (1994) and Smither et al (1993) found, somewhat counterintuitively, that applicant reactions to selection procedures are unrelated to how well they do in the process. Macan et al also showed that although perceptions of the tests (an ability test and assessment center) were important in influencing job acceptance intentions, overall impressions of the work and organization were even more important. Applicant reactions to selection procedures should continue to be an important area of study. Research will be most useful when rooted in organizational justice theories (e.g. Gilliland 1994).

VALIDITY AND UTILITY

Models of Validity

As we go to press, a distinguished panel of psychologists and educational experts is finishing a draft of the Standards for Psychological and Educational Testing. This document is being prepared with support from (and under the scrutiny of) the American Psychological Association, the American Educational Research Association, and the National Council on Measurement and Evaluation. A very important element of the Standards will

be their treatment of the concept of validity. In the literature, validity has been increasingly discussed as a unified concept (e.g. Messick 1995) rather than as composed of various categories (e.g. content validity, criterion-related validity). A key but controversial aspect of Messick's definition of construct validity is the incorporation of consequences. Messick argues convincingly that the meaning of test scores can only be interpreted in the context in which they are used. Others (e.g. Brown 1994; Tenopir, unpublished working paper) have expressed concern that endorsement of "consequential validity," especially in the new Standards, is likely to be abused and misinterpreted by those opposed to testing, most notably in the education arena where the multiple-choice test is currently in disfavor. Smith (1994) has proposed a theory that attempts to explain relationships between the content of selection measures and their relationships with job performance. He distinguishes between universals (characteristics required for success in virtually all jobs) and occupationals (characteristics required for a subset of jobs or a single job). The third aspect of test content, "relationals," is focused on characteristics required for person-organization fit (discussed elsewhere).

Meta-Analysis and Validity Generalization

Numerous meta-analyses addressing a variety of important questions have been published during the period covered by this review. Allen & Preiss (1993) discussed the "necessary and symbiotic relationship between meta-analysis and replication research" (p. 9), with replication providing the input to meta-analysis and meta-analysis providing the direction for future research. In related work, Murphy (1994a) discussed the importance of the quality of the research that is included in meta-analyses. For example, the average size of the individual samples included in meta-analyses and the quality of the criterion measures used are directly related to the power of meta-analyses to detect moderator effects. Sagie & Koslowsky (1993) demonstrated that meta-analytic techniques have limited power to detect moderators, especially if the moderator effects are relatively small. Since individual studies lack power to detect moderators as well (see section on "Statistical and Measurement Issues"), this is particularly disheartening.

There have been a number of methodological advances in meta-analysis, and some of these advances have implications for conclusions drawn based on past meta-analyses. Law et al (1994) demonstrated that recent refinements in the Hunter et al (1982) procedures do, in fact, increase the accuracy of results. Vevea et al (1993) developed procedures for identifying and assessing bias in the selection of studies to be included in meta-analyses and used these procedures to demonstrate that selection bias does not appear to affect conclusions drawn in previous meta-analyses of GATB validities. Using a Monte Carlo approach, Koslowsky & Sagie (1994) provided information about the relative proportions of true and artifactual variance in meta-analyses under a variety of conditions. In general, sampling error (not unexpectedly) accounted for most artifactual variance, and commonly used corrections for range restriction decreased the proportion of artifactual variance more than corrections for measurement error. Huffcutt & Arthur (1995) developed a statistic appropriate for detecting outliers in meta-analyses and demonstrated that, in their meta-analysis, the removal of outliers helped clarify what had been a confusing meta-analytic result.

In perhaps the most exciting potential methodological advance in this area, Viswesvaran & Ones (1995) discussed procedures for using meta-analytically derived matrices of estimated true score correlations as the input for structural modeling. This allows for large-scale theory testing, even when all of the relevant variables and relationships have not been included in each study. Variations on this approach have already been used in a handful of studies, but a great deal of work is needed on the assumptions and calculations involved before widespread application is prudent. For example, the use of correlations as opposed to covariance matrices in these analyses may be problematic.

Selection Utility

Utility researchers continue to battle with the problems involved in estimating key parameters included in traditional utility models, most notably the standard deviation of performance in dollars (SDy). While additional approaches have been proposed, there is little consensus concerning the proper measurement methods (e.g. Cesare et al 1994, Raju et

al 1993). Another problem that continues to plague this area is the lack of interest managers and other decision makers have in the results of utility analyses. In fact, Latham & Whyte (1994) found that managers expressed less support for implementing a valid selection procedure when they were presented with utility information than they did when they were presented with validity information only. Because the primary purpose of utility analysis is to communicate the value of human resource management systems to managers, these troubling results have stimulated a good deal of discussion. Some have suggested that research is needed regarding how managers actually make selection decisions and what types of information they might find useful (e.g. Boudreau et al 1994).

Another approach to this problem has been to expand the concept of utility to make the results more relevant to managers' and decision makers' needs. Some simplifying assumptions made in traditional utility analyses have been called into question, and models have been proposed that attempt to more accurately reflect organizational realities. Boudreau et al (1994) suggested that utility models should consider: (a) the fact that performance is multidimensional, (b) that predictors are typically added to existing selections systems rather than replacing them, and (c) that organizations often do not use optimal top-down selection. Boudreau et al also pointed out that individuals' value to the organization may go beyond their current performance in a particular job, which suggests that utility analyses may be improved by incorporating considerations of person-organization fit. Russell et al (1993) further suggested that utility analyses need to reflect the strategic context faced by managerial decision makers, where profit maximization may be only one of many strategic objectives, and maximizing performance is only one of several possible goals in selection. Russell et al also suggested that many of the variables relevant to utility estimation can change over time (e.g. strategic needs, predictor-criterion relationships), and thus it is likely that utility will need to be periodically reassessed. Costs not traditionally included in utility analyses have also been incorporated, such as recruitment costs (Law & Myers 1993) and legal exposure (Roth 1994).

STATISTICAL AND MEASUREMENT ISSUES

There has been increasing endorsement of the notion that validation is an estimation problem, and we see commensurate interest in improving the available procedures for providing more accurate estimates. Regarding corrections for restriction in range, Held & Foley (1994) provided an assessment of the relative accuracy of univariate and multivariate corrections in a variety of situations. Abrahams et al (1993) demonstrated that validities are severely underestimated when criterion data are unavailable for the lower performing portion of the sample due to failure, resignation, or dismissal; and they demonstrated the effectiveness of a new procedure for more accurately estimating validities in these cases.

Unfortunately, a relatively small proportion (4%) of validity studies actually employ range restriction corrections (Ree et al 1994a). One major obstacle to the use of range restriction corrections in applied settings is the fact that estimates of predictor variance in the unrestricted (i.e. applicant) sample are often not available. Hoffman (1995) provided some support for using published norms to make these corrections, by demonstrating their consistency with empirical results. However, Sackett & Ostgard (1994) used a large sample of data (but only a single test, the Wonderlic Personnel Test) to demonstrate that job-specific applicant pools have smaller standard deviations than the national norms, especially for complex jobs. They recommend considering these differences when using published norms to make corrections.

The detection of variables that moderate validity and the psychometric issues involved have received much recent research attention. One important finding in this area is the alarming lack of power most statistical procedures have for detecting existing moderators. Aguinis (1995) provided a summary of the issues and recent progress in this area. Research has generally shown that moderated multiple regression (MMR) is the most powerful procedure for the detection of moderators. Factors influencing the power of MMR include the distributions of variables (e.g. restriction in range), measurement error, "coarseness" of the variables, the true effect size, and (obviously) sample size. Worse yet, many of these

effects are actually interactive, which results in very low power in many common situations. This literature suggests that conclusions concerning the absence of a significant moderator variable should be drawn cautiously, and power to assess moderators should be assessed whenever possible. Suggestions for addressing these problems in future research include basing the search for moderator variables on sound substantive theories, paying more attention to the dependent variables (Bobko & Russell 1994), and using structural modeling to address measurement error problems (for an example, see Jaccard & Wan 1995).

There has been somewhat of an explosion in the use of structural modeling analyses in a variety of areas of psychology, including personnel psychology (Stone-Romero et al 1995). Uses have included assessing the effects of method variance (Schmitt et al 1995, Williams & Anderson 1994), exploring the relative accuracy of different response scales (Chang 1994), and modeling the structure of performance (Hanson et al 1993). These studies illustrate the potential of structural modeling to untangle error and true score variance to more directly assess underlying relationships.

Computer programs for fitting structural equation models to the data and estimating model fit are becoming more readily available and user friendly. There have also been many improvements in the available measures of model fit, as well as improvements in model testing procedures. Medsker et al (1994) provided an excellent summary of this rapidly progressing area. These authors also reviewed applications of structural equation modeling in recent studies and noted that while there have been some improvements in the procedures used, current practices have not kept up with methodological advances. It is worth noting that some are critical of structural modeling techniques and the potential of this approach for advancing our field (e.g. Brannick 1995), but others argue that many of the identified shortcomings reflect deficiencies in applications of structural modeling and not the approach itself (e.g. Williams 1995).

A few miscellaneous statistical and measurement developments also deserve mention. Sidick et al (1994) found that a three-alternative multiple-choice test had psychometric properties similar to those of five-alternative tests, confirming and extending similar work in the education arena. Three-alternative tests take less time to develop and to administer, so this finding could enhance efficiency a great deal. White et al (1993) reviewed recent advances in log-linear modeling and described how these procedures can be used to obtain more information concerning categorical and nominal variables than is provided by more traditional approaches (e.g. chi-square tests).

There have been several recent attacks on traditional significance testing, highlighting the deficiencies of null hypothesis testing (Cohen 1994, Schmidt 1996). Although some of the criticisms are not new, the pervasiveness of reliance on significance testing indicates that they may still be warranted. A particularly serious problem occurs when exclusive reliance is placed on significance testing in studies with low power. Recommended alternatives are point estimates and confidence intervals, with results across studies combined using meta-analytic procedures. However, confidence intervals for even relatively simple statistical estimates can be fairly complex (for some very useful examples, see Olkin & Finn 1995), with confidence intervals for more complex multivariate procedures difficult or impossible to conceptualize or calculate. While Schmidt's proposal to abandon significance testing may be controversial, the merits of reducing the role of significance testing are more widely accepted.

One somewhat unfortunate theme emerging in this literature is that there are many improvements in statistical procedures available for use in selection research, but researchers are slow to adopt these improvements. This could be because statistical procedures are becoming unwieldy in their complexity. Keeping up with the state of the art in the wide variety of multivariate procedures that have become so integral to our field (e.g. meta-analysis, structural modeling) is rapidly becoming a full-time job. Perhaps future research will more often require collaboration with statistical or measurement specialists who can provide the insight needed to use these powerful procedures appropriately and with maximum benefit.

EQUAL EMPLOYMENT OPPORTUNITY AND LEGAL ISSUES

Recent activities on the legal and legislative fronts provide clear focal points for research and, especially, practice activities. Within the

past several years, the National Academy of Science's (NAS's) report on Fairness in Employment Testing, the Civil Rights Act (CRA) of 1991, and the 1990 Americans with Disabilities Act (ADA), have fueled renewed and increased scrutiny of industrial/organizational psychology science and practice.

Sackett & Wilk (1994) provided an excellent in-depth discussion of score adjustment (e.g. according to race or gender) in preemployment testing, reviewing the legal environment for personnel selection surrounding passage of the CRA of 1991, as well as the background, rationale, and consequences of score adjustment. These authors also provide a review of group differences and their relationships to job performance for cognitive ability, personality and physical ability tests, biodata, and interest inventories. A second article in the same issue of the *American Psychologist*, by Gottfredson (1994), discusses within-group norming in the context of what she calls "politically selective science." She calls for the addition of noncognitive tests to cognitive test batteries to help reduce adverse impact but notes that this strategy is most likely to provide little help with cognitively complex jobs. Kehoe & Tenopir (1994) summarized the literature on group differences, types of adjustment strategies, and evaluation of these adjustment strategies. Finally, Varca & Pattison (1993) reviewed recent employment discrimination litigation to examine changing interpretations of evidentiary standards (i.e. causation, burden of proof, and business necessity) and concluded that currently only the burden of proof standard is clear cut (it rests with the defendant); and Ledvinka (1995) discussed the CRA of 1991, the ADA, and recent antitestng initiatives (e.g. *Soroka v. Dayton-Hudson Corporation*) within the context of government regulatory activity.

A more specialized debate has evolved concerning the use of banding as a method of score adjustment. Banding involves defining a range of scores that will be treated as if they were equivalent; the width of this range is determined by the reliability and standard error of measurement. In fact, Murphy (1994b) suggested that when tests of moderate to low reliability are used, banding may lead to treatment of many applicants as statistically indistinguishable. Essentially, tests with high reliability work against achieving diversity with a banding approach! In 1994, the Scientific Affairs Committee of the Society for Industrial and Organizational Psychology released a report on banding, examining the rationale, methods, and implications of banding procedures. The committee concluded that general research on banding systems highlights a number of issues that must be considered in evaluating specific strategies, but it does not necessarily resolve policy debates that surround banding. The decision to use or reject banding in specific circumstances requires a careful evaluation of its costs and benefits.

Murphy et al (1995) examined separate and joint effects of several selection system characteristics (e.g. selection ratio, reliability, preferential hiring) and applicant pool characteristics (e.g. proportion with lower scores, mean differences between subgroups) on selection outcomes under banding. They suggest that the single best strategy for increasing the proportion hired from a lower scoring group is to change the applicant pool, rather than modify the selection system. Schmidt & Hunter (1995) argued that the statistical rationale for banding, and the operational banding procedure itself, are inconsistent and that the latter is used by advocates to mask minority preference rules. Siskin (1995) presented a mathematical model that includes the expected difference in performance between the top-ranked and bottom-ranked person in the band, and the likelihood that the top-ranked person will actually outperform the bottom-ranked person. Siskin argues that the results support the use of banding, and he suggests that the social gains of banding may be greater than the economic cost. In a chapter on personnel selection in *The Changing Nature of Work* (Howard 1995), Landy et al (1995) discussed the sliding band approach and pointed out that the best estimate of a candidate's true score on a test is still the observed score, regardless of the standard error; the rebuttal is that some modest precision might be sacrificed to realize the social goal of workforce diversity. The use of banding as a viable score adjustment approach is sure to be debated further in the literature and in the courts.

The ADA of 1990 generated much discussion about the disabilities

covered and what constitutes a "medical test." Working definitions should continue to evolve based on administrative guidelines and relevant case law. Klimoski & Palmer (1993) reviewed the ADA with regard to the recruitment and assessment of job applicants and provided a discussion of issues and concerns from both the applicant and employer perspective. Fischer (1994) and Pati & Bailey (1995) summarized the ADA and discussed its practical implications related to measurement issues and organizational practices.

Although previous studies have shown age to be a poor predictor of performance, age stereotypes continue to prevail in the workforce. Finklestein et al (1995) reviewed the existing studies of age discrimination in simulated employment settings, identified situational characteristics that might contribute to this type of discrimination in employment-related decisions, and developed a conceptual framework for studying age discrimination. They also conducted a meta-analysis of lab study findings and found that older workers were rated as less favorable when research participants were younger workers and when no job-relevant information was provided.

Regarding practice issues, Pulakos & Schmitt (1996) examined two strategies for reducing adverse impact in a federal investigative job and found increases in criterion-related validity and decreases in subgroup differences when a paper-and-pencil verbal ability measure was supplemented with a situational judgment test, a biodata measure, and a structured interview. Lefkowitz (1994) found a significant pattern of assigning new clerical employees at a large commercial bank to supervisors of the same ethnic group; likewise, later reassignment increased the percentage of organizational "ethnic drift" toward same-race supervisor-subordinate dyads. Finally, Gutman (1993) published a book on EEO law covering current employment issues such as Title VII of the CRA of 1964, the CRA of 1991, the ADEA, and the ADA, with an emphasis on the pragmatic implications of such issues for human resources practitioners. The current litigious nature of our society suggests that legal issues will continue to play an important role in selection research and practice in the years ahead; few topics in our field provide such polarized points of view.

SELECTION FOR WORK GROUPS

The use of groups to accomplish work tasks is enormously popular in a wide variety of organizations. Research concerning the nature of work groups and work group effectiveness continues to accumulate at an accelerating pace (e.g. Guzzo & Salas 1995, Salas et al 1995). Work groups serve a variety of purposes and take on a variety of different forms, and Klimoski & Jones (1995) make a strong case that different types of work groups have different knowledge, skill, and ability (KSA) requirements. One type of work group that has received a good deal of research attention, mostly in the military, is the "team," which has been defined as including, at a minimum, two people, a common goal, specific role assignments, and interdependence of members. Important themes in the research on teams include uncovering the behavioral correlates of effective teamwork and developing measures of team performance (Sales et al 1995). Results of this research provide a great deal of information regarding characteristics needed in effective team members.

Stevens & Campion (1994) reviewed the literature on work groups and provided a discussion of the potential KSA requirements for teamwork and the implications of these teamwork KSAs for selecting group members. Not surprisingly, interpersonal skills consistently emerge as important for working in groups. These include conflict management and resolution, collaborative problem solving, and communication. Hogan & Lock (1995) pointed to the current lack of empirical information concerning the interpersonal skills needed in the workplace and developed a taxonomy of these skills using the critical incident technique. Stevens & Campion suggest that interviews, assessment centers, and biodata might be appropriate for tapping such KSAs, and they demonstrate that a situational judgment type measure can also be useful in selecting work group members. In addition, work group members are often required to have broader skill sets than individuals who work more independently. Frequently work group members are expected or required to know aspects of one another's jobs in order to facilitate coordination and communication or to provide backup for other group members (Sales et al 1995).

The issues involved in staffing work groups take on another level of complexity when we consider the mix of people within each work group. Past research has yielded equivocal results concerning the effects of work group heterogeneity on performance. A model recently developed by Jackson et al (1995) attempts to describe how work group diversity impacts on performance and to integrate research findings in this area. One important point in this regard is that the type of diversity is very important, not just its presence or absence. Work group diversity has been discussed in the past as if it were a unitary concept, when in fact groups can be diverse in terms of member abilities, skills, knowledge, demographics, personality, and so on. Klimoski & Jones (1995) discussed the importance of having the correct mix of people in work groups, and suggested taking group norms into account when selecting people to join an existing team. Research in this area is still a long way from realizing the potential payoff Landy et al (1994) suggested was possible, but there has been a great deal of progress made toward understanding work groups and some preliminary attempts to apply this understanding to selection and staffing issues.

PERSON-ORGANIZATION FIT

The past few years have seen a surge of interest in person-organization (P-O) fit research and thinking. The basic notion here is that a fit between personal attributes and characteristics of the target organization contributes to important individual and organizational outcomes. Kristof (1996) noted, however, that there is considerable confusion about what P-O fit is. For example, P-O congruence is sometimes equated with person-environment fit, where the latter also encompasses person-vocation and person-job fit. In addition, researchers have studied direct judgments of perceived fit (e.g. interviewers' perceptions of applicant fit) and indirect measures of actual fit (e.g. the fit between independent judgments of individual and organizational characteristics). Kristof provided a very useful overview of current progress and problems in P-O congruence research. Overall, Schneider's work on the attraction-selection-attrition (ASA) model is perhaps most noteworthy in this area. Schneider et al (1996) provided an update of ASA research. The ASA framework suggests a different way of viewing personnel selection, at the organizational rather than individual effectiveness level. This approach has evolved over the years, and Schneider et al now argue that homogeneity in organizations (e.g. in personality, attitudes, and values) is probably good early in the life of organizations because it contributes to enhanced cooperation and communication; however, such homogeneity may later lead to inflexibility and difficulty adapting to changing external environments. Related to this view, Ostroff (1993) found that high schools where there was an overall good fit between organizational climate and teachers' personalities tended to be more effective as organizations, though the N was quite small (N = 29). In addition, the relationship was reversed for the climate dimensions of structure and hierarchy, which suggests that lack of congruence in some areas might be important for organizational effectiveness.

One aspect of the ASA argument is the "gravitational hypothesis" that persons in the work force will over time sort themselves into jobs that are compatible with their interests, values, etc. Wilk et al (1995) tested this hypothesis and found that general cognitive ability predicted whether workers moved to higher or lower complexity jobs over a five-year period, and that longer-term employees in jobs are somewhat more homogenous in ability compared with shorter-tenured employees. Lancaster et al (1994) found that, in an employment agency setting, persons with similar abilities and vocational interests tended to apply for similar jobs, but this was not true for personality. The authors speculate that ability and vocational interest requirements are relatively homogenous for jobs, whereas personality may be more of a P-O fit variable.

Two studies used a forced-choice test format to select for fit. Villanova et al (1994) developed a job compatibility test for selecting motion-picture theater workers. With a predictive validity design, they found significant correlations with job performance and turnover. Barrett (1995) reported research on an instrument that has as items performance requirements for the target job that applicants rate according to importance. Supervisors provide Q-sort ratings of each one's "actual" importance and applicant-supervisor fit is evaluated. Concurrent and

predictive validities are mostly in the 30s and higher.

Adkins et al (1994) found that recruiters' assessments of P-O fit in work values are somewhat idiosyncratic and better aligned with the fit between recruiter and interviewee work values. Further, recruiter judgments of P-O fit did not predict their ratings of employability. In an interesting study, Gustafson & Mumford (1995) found that patterns of personality scores used to form homogenous groups were related to job satisfaction and performance, but importantly, the influence of personality type on these outcomes was enhanced when type of work situation was taken into account, supporting a P-O fit interpretation. Cable & Judge (1994) showed that characteristics of compensation systems had a main effect on pay preferences but that fit between individuals' personality and pay system characteristics enhanced the prediction of pay preferences and job attractiveness. In a lab study, Bretz & Judge (1994) studied the impact of various organizational characteristics such as group-based reward systems and procedural justice policies on the dependent variable of whether students would accept a job offer from each of the hypothetical organizations. Most important, interactions were found demonstrating support for the hypothesis that human resource system characteristics may be most influential regarding job choice when considered in the context of P-O fit. Edwards (1994) provided a major methodological criticism of congruence indices that most P-O fit research employs. A polynomial regression approach is proposed to overcome these problems.

In other studies, Spector et al (1995) found in a sample of civil service **employees** that two **personality traits** --anxiety and optimism--correlated significantly with several job characteristics (e.g. autonomy, variety) describing these persons' job. Finally, Day & Bedeian (1995) found that similarity between the personality of individuals and others in the organization predicted job performance. These authors call for a test of the predictive power of the traditional selection model **matching** applicant attributes with job performance requirements to this congruence model **matching** applicant attributes with the attributes of organizations or their members. Designing a fair test of these models will not be easy, but it is reasonable to ask the question of how well the P-O congruence model predicts performance and perhaps other important outcome variables **compared** with the person-job requirement fit model that has been our standard methodology. Importantly, the end-of-jobs (e.g. Bridges 1994) and competency-based-organizations (e.g. Lawler 1994) view of the future argues for increased use of the P-O model for selection. As organizational flexibility in effectively utilizing employees increasingly becomes an issue (e.g. workers are more often moved from job to job in the organization), the P-O model may be more relevant in comparison with the traditional person job **match** approach (e.g. Kristof 1996). Our view is that both models will be useful and may productively be employed in concert.

SUMMARY OF MAJOR TRENDS

In the introduction, we described three themes that provide a way of characterizing recent progress in the area of personnel selection. First, increased attention to criteria and models of performance is a promising development. For years, work on criteria lagged behind work already accomplished in several predictor domains. It is encouraging to see renewed energy applied toward development of taxonomies and models of performance. We expect this trend to continue for the foreseeable future. The reemergence of personality and related volitional constructs as predictors is also a positive sign, in that this trend should result in a more complete mapping of the KSAO requirements for jobs and organizations, beyond general cognitive ability, for example. What is even more exciting, however, is how these two themes come together to reveal interpretable relationships between individual predictors and criterion constructs. Much more work is needed to clarify these linkages, but it now appears, for example, that ability best predicts technical proficiency-related criteria and personality best predicts such criterion domains as teamwork, interpersonal effectiveness, and contextual performance. We strongly encourage continued research to discover and confirm relationships between ability, personality, experience, job knowledge, technical proficiency, extra-technical proficiency domains, and overall job performance. This work continues to help us raise personnel selection from a technology to a

science.

The third theme, person-organization (P-O) fit research, is gaining in popularity. As mentioned earlier, we would like to see more clarity in how P-O fit is defined and measured. In addition, we need to gain more understanding of how effective the P-O congruence model is for personnel selection applications compared with the more traditional model of person-job matching. Conceptually, it seems that P-O congruence becomes a more appropriate model for selection where "the job" is not as relevant a concept. We look forward to further developments in P-O fit research that evaluate the usefulness of this model for selection.

More broadly, we are optimistic for the future regarding the science and practice of personnel selection. Beyond our central themes, meta-analyses suggest that many of our predictor measures are encouragingly valid for predicting job performance. Methods available for studying predictor-criterion links are increasingly powerful. In addition, new areas of research, such as applicant reactions, team selection, and computerized testing, are emerging and progressing. As public and private sector organizations reconfigure and reposition themselves to remain competitive in an expanding global environment, we believe that personnel selection research will play an important role in the process. We are enthusiastic about participating in the personnel selection research and practice enterprise of the future.

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